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FERTILITY AND FEMALE LONE PARENTS IN CANADA: ANALYSIS FROM 1971 CENSUS DATA

by

LIZY ALEYAMMA KURIAN

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH

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ABSTRACT

An analysis of female lone parent fertility was conducted utilizing 1971 census data retrieved from Public Use Sample Tape files. Basic research strategy incorporated bivariate analysis, as well as a stepwise regression which permitted the comparison of the fertility of different types of female lone parents -- separated, divorced, and widowed-- with the fertility of intasct families where the husband is present. The bivariate analysis tended to support the general fertility differentials of education and type of residence. In the case of age at first marriage, only the widowed did not evidence the negative relationship found among the divorced and the separated female lone parents. Of the three marital statuses of female lone parents, only the widowed status tended to support the general fertility differential of ethnicity. With regard to religious affiliation, the widowed manifested the highest degree of similarity and the divorced female lone parents showed the least degree when considering high fertility. When low fertility is taken into consideration, only the widowed conformed to the general pattern. The divorced female lone parents differed the most from the intact families and the widowed female lone parents differed the least in terms of fertility patterns. The greatest difference among the female lone parents was found between the widowed and the divorced and the least difference was between the divorced and the separated.

Stepwise regression analysis yielded different equations for the various family types. In general, income and education were found to be strong predictors, type of residence and religion to be moderate predictors, and age at first marriage and ethnicity to be weak predictors of fertility patterns.

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I. FERTILITY AND FEMALE LONE PARENTS IN CANADA ANALYSIS FROM 1971 CENSUS DATA

A. INTRODUCTION

This thesis is intended to study the patterns of fertility among female lone parents in Canada. According to Brandwein, Brown and Fox (1974:498), a woman may become a single parent through one of several circumstances: (1) never married women bearing children; (2) becoming separated or divorced; or (3) becoming widowed. A fourth circumstance would be single person adoption (Orthner, Brown and Ferguson 1976:429). This study is restricted to the female lone parents arising from widowhood, divorce and separation.

In spite of the societal preference for the traditional husband-wife family, or the intact families, single parent families (especially female lone parent families) have been on the increase in Canada over the past 35 years (Wargon, 1979:83, 91, 92; Bane, 1980:11). As can be seen in Tables 1, 2 and 3, the high proportion of one parent families recorded between 1941 and 1956 was likely due to the increase in widowed females during World War Two and the Korean conflict. Correspondingly, this influenced the lower proportion of husband-wife families found during this period as portrayed in Table 2. The percentage of widowed one parent families has declined while at the same time, the proportion of divorced and never married headed lone parent

Table 1.

Number and Percentage of Husband-wife and One-parent Families in Canada: 1941-1981.

Family Type	1941	1951	1956	1961	1966	1971	1981
Total	2509664	3287384	3711500	4147444	4526266	5070680	6043735
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Husband-wife	2202707	2961685	3393061	3800026	4154381	4591940	5403925
	87.8%	90.1%	91.4%	91.6%	91.8%	90.6%	89.4
One-parent*	306957	325699	318439	347418	371885	478740	639810
	12.2%	9.9%	8.6%	8.4%	8.2%	9.4%	10.6

Note: *One parent families include one parent married heads.
Source: *Wargon, S.T.(1979), Canadian Households and Families: Recent Demographic Trends, Ottawa: Statistics Canada.*

Table 2.

Number and of Percentage of Families by Marital Status, Canada: 1951-1971.

Marital Status	1951	1956	1961	1966	1971
All status	325699	318439	347418	371885	478740
	100.0%	100.0%	100.0%	100.0%	100.0%
Married*	94179	84343	108799	112051	161290
	28.9%	26.5%	31.3%	30.1%	33.7%
Widowed	216641	216924	213657	226950	222625
	66.5%	68.1%	61.5%	61.0%	46.5%
Divorced	10108	12341	15636	22115	57875
	3.1%	3.9%	4.5%	6.0%	12.1%
Never married	4831	4831	9326	10769	36950
	1.5%	1.5%	2.7%	2.9%	7.7%

Note: *Includes the categories "married, spouse absent" and "separated."
Source: *Wargon, S.T.(1979), Canadian Households and Families: Recent Demographic trends, Ottawa: Statistics Canada.*

Table 3.

Percentage Change in Different Categories of Families in Canada: 1951-1981.

Marital Status	1951-56	1956-61	1961-66	1966-71	1971-81
Married*	-2.4%	4.8%	-1.2%	3.6%	4.8%
Widowed	1.6%	-6.6%	-0.5%	-14.5%	-20.0%
Divorced	0.8%	0.9%	1.5%	6.1%	9.0%
Never Married		1.2%	1.2%	4.8%	6.2%

Note: *Includes categories "married, spouse absent" and "separated." 1981 data is not given as this thesis deals with the data up to 1971.

Source: *Wargon, S.T.(1979), Canadian Households and Families: Recent Demographic trends, Ottawa: Statistics Canada,* and *1981 Census of Canada.*

families has increased markedly. Contributing to this more recent turn-around has been the increase in marital dissolution and the increasing number of never married parents of illegitimate children (Wargon, 1979:22, 26, 27). The lower remarriage rates of divorced women than of men also contributes to this increase in female-headed lone parent families (Wargon, 1979:60; Glick, 1984:7-27).

The tendency of widows to remain unmarried, particularly in the later ages, has contributed to the overall increase in lone parent families. The differential mortality experienced at later ages results in higher mortality rates for older males than their spouses. The traditional mating gradient in Canada suggests that women seek marriagable eligibles from cohorts older than they are, however, because of differential mortality there are very few eligible males for older widows. This explains the higher remarriage rates for elderly widowers than for widows which results in a greater number of widowed lone parent families among women over the age of 65 in 1971 (Wargon, 1979:60, 87; Miron, 1980:7; Basavarajappa, 1978:19, 31; Harrison, 1981:20; Kuzel and Krishnan, 1973).

According to Davis and Blake (1956), both the time between unstable unions and time spent in post-widowhood celibacy have a negative relationship with the fertility rate. Other studies reveal that marital dissolution in turn decreases child-bearing (Thornton 1978, Cohen and Sweet 1974, Grabil, Kiser and Whelpton 1958). Thornton (1978)

states that fertility starts declining two years prior to actual marital separation. He also found that marital dissolution without remarriage functions to lower child-bearing, thus affecting the family size among the lone parent families. These studies lead one to expect lower fertility among the female lone parents due to lower proportion of reproductive span spent in married life resulting from marital disruption.

The earlier a woman gets married, the greater the proportion of reproductive span spent in married life, if the marriage continues without any disruption. Miller (1976) states that the longer the people are married, the more children they will have. Henripin (1972:18, 129) in his study shows that women who married under 20 in relation to the women who married between 20 and 24 years had an excess fertility of 24 to 35 percent. Those who married after 25 had a reduced fertility of 26 to 32 percent. There is a reduction of 46 to 52 percent, 68 to 72 percent and 83 to 89 percent in fertility for the women married between 30 and 34 years, 35 and 39 years and 40 and 44 years respectively. This is supported also by the United States data (Population Reference Bureau Inc. 1980).

It has been shown that children are generally born in the early stages of marital career (Miller, 1976). Therefore one can assume that age at marriage is not the only factor affecting fertility. The following studies emphasize the cohort effect on fertility through smaller intervals between

successive births and having fewer children among the younger cohorts. Henripin (1972) states that the greater fertility among women marrying younger is less among the present child-bearing cohort than among the older child-bearing cohorts. Hill (1970:84) and Glick (1977) also talk about the cohort effects in relation to this. Glick found that women marrying during the 1970s are expected to have between one and two fewer children than earlier marriage cohorts. Hill says that the present child-bearing cohort have fewer children with smaller intervals between births than was the case of earlier child-bearing cohorts. Wargon (1979) also found the same pattern among the Canadian families. McVey (1981) states that the general fertility rate has declined even though the women in child-bearing years (15-44) continued to increase since 1961.

The difference in fertility patterns can be due to higher levels of education of the younger cohorts, higher female labor force participation, higher proportion of people living in urban areas and changes in values and norms relating to birth control and sexual behaviour (Pool and Bracher, 1974 and McVey, 1980), in conjunction with the increased age at marriage. Associated life style changes such as sexual permissiveness and cohabitation make it easier for people to choose between staying married and unmarried (Clayon and Voss, 1977; Udry, Bowman and Morris, 1975; Davidson and Leslie, 1977; Mackwin and Maykovich, 1976; King, Balswick and Robinson, 1977; Ruzicka, 1977;

Ferrell, Tolone and Walsh, 1977).

Thus the number of children born to female lone parents may be dependent upon the stages in the child-bearing cycle these women are passing through at the time of marital dissolution. It may also depend upon the age at first marriage and duration of the marriage.

Taking the above into consideration, the fertility of female lone parents may or may not differ from the fertility of the females of the intact families, where both husbands and wives are present, controlling for age at first marriage, type of residence and other factors such as ethnicity, religion, education, and income. It is worthwhile to compare the fertility of female lone parents whose pattern of sexual life is presumably different from that of the females of intact families.

According to Davis and Blake (1956), societies of varying cultural patterns do not necessarily differ in their fertility values in relation to these intermediate variables. On the other hand they may exhibit similar values. The actual birth rate depends on the net balance of the values of all the variables.

Studies indicate an inverse relationship between fertility and other socio-economic variables such as age at marriage, type of residence, education and income. The nature of the relationship between religion and fertility is discussed in the next chapter.

The first objective of this study is to determine if the relationship between different socio-demographic variables and fertility among the female lone parents is the same as the relationship between fertility and these socio-demographic variables as shown in the general theories of fertility.

The second objective is to see if their fertility differs from that of the women of intact families in which both husbands and wives are present. A comparison between the female lone parents and the male heads of the intact families in relation to the effects of different socio-demographic variables on fertility, mentioned earlier, will be made as a part of the second objective. This comparison will determine if characteristics of the ex-spouses of these female lone parents are essential in understanding the fertility of female lone parents. Another comparison will be made between the females of the lone parent families and the females of the intact families. These comparisons will help understand who (the male heads or the wives of the intact families) is more similar in the relationship between fertility and the socio-demographic variables under study to the relationship shown in general theories.

The third objective is to examine the fertility of different categories of female lone parents (i.e., widowed, divorced and separated), to see if they differ among themselves and if they differ, how and to what extent they

differ, in relation to the variables employed in this thesis.

B. THE PLAN OF THE THESIS

Chapter II presents a review of literature dealing with the general relationship between fertility and the socio-demographic variables. Chapter III deals with data source and the methodology. chapter IV deals with the results and analysis of the crosstabulations and the regression analysis. In Chapter V, the main results are summarized and the the limitations of the study and the suggestions regarding future research are discussed.

C. SIGNIFICANCE OF THE STUDY

As stated before, female-headed lone parent families are increasing in Canada. The objective of this study is to see if their fertility differs from that of the intact families in relation to any of the socio-demographic variables attributed either to the females or the males of the intact families. If they differ, it can have an effect on the population of Canada depending upon the direction of difference.

In addition, the study is significant because of the increasing dependency of female lone parent families on the welfare programs, established at municipal, provincial and federal levels as well as by the voluntary agencies in coping with the many economic, social and emotional problems

facing the female lone parents and their children.

A quote from Kalbach and McVey, (1979:388) may be helpful in understanding its significance in the field of household formation to the year 2001. "For the projection period, household formation is expected to increase at a slightly higher rate than family formation. Signs of changing social conditions may be seen in the fact that households with spouses absent are expected to increase relatively more rapidly than the number of total households, while single person households are expected to increase less rapidly throughout the period following 1981."

The poorer economic situation of the female lone parent families has been indicated in many studies (Stein 1970; Brandwein, Brown and Fox 1974:498-500; Chilman 1975:49-60; Bronfenbrenner 1976:29; Rawlings 1980; Thomson and Gongla 1983; Smith 1980 and Bould 1977:339-349). It is inconvenient for them to work full time as they have to stay home to care for the children as well as for other household jobs. This worsens their already existing bad economic condition (Brandwein, Brown and Fox 1974:498-515). At the same time, state assistance may be decreased, if they do extra work hoping to improve their financial situation. Decision not to support themselves on welfare will deprive them of some of the benefits, such as legal aid, dental care, emergency aid and drugs they cannot afford to provide for from their own resources. All these compel them to stay on social assistance which may be meagre. The difference in earning

power between men and women in the paid labor market and lack of training for skilled jobs of the female lone parents making them unable to acquire better jobs, add to the bad economic condition of the female lone parents (CASW, 1977; and Rawlings, 1980).

The social and emotional adjustments that the female lone parents and their children have to make are clearly stated in studies by the Canadian Council on Social Development (1971), Schlesinger (1975, 1978) and Thomson and Gongla (1983), Rawlings (1980), Smith (1980) and Guyatt (1971). The social stigma attached to the lone parents makes adjustment difficult for them as well as their children. The absence of a male model in the family adds to the psychological adjustment problems on the part of their children. Government, as well as, voluntary agencies may have to work for the improvement of the existing poverty conditions of an increasing proportion of female lone parents according to the recommendations given in the above mentioned studies and the ones provided by the Canadian Advisory Council on the Status of Women (1976, 1977).

Results of this proposed thesis will help one to know the direction of difference in fertility and the proportion of children in different categories of female lone parents compared to the females of the intact families, in relation to several socio-demographic variables. This will enable one to plan the degree and quality of programs to be organized for the female lone parents and their children.

II. GENERAL PATTERN OF RELATIONSHIP BETWEEN FERTILITY AND SOCIO-DEMOGRAPHIC VARIABLES

As shown earlier in the introductory chapter, fertility of female lone parents may be dependent upon the stages of fecundity at the time of marriage as well as marriage dissolution due to separation, divorce or death of the spouse - in other words, duration of marriage in relation to age at marriage. The earlier a woman gets married, the greater the duration of marriage, if the marriage goes without any disruption. The importance of conception of less number of children and compression in child-spacing in the present generation has been emphasized by Wargon (1979), Hill (1970) and Glick (1977). Miller (1976), at the same time, has shown that children are generally born in the early stages of marital career. These studies may lead one to consider duration of marriage with less importance in the younger generation. This may be why aaccording to Wargon (1979), the size of the family by sex of head was just about the same for intact and lone parent families in 1971.

The present study includes samples of older cohorts, among whom the pattern of fertility may be different. Under these circumstances, along with the cohort effect, the age at first marriage and duration of marriage also may be interesting areas to be looked into. Other factors like ethnicity, religion, education, income and type of residence also affect fertility in different ways. Hence the general pattern of the relationship between fertility and these

variables in Canadian perspectives are reviewed in this chapter.

A. AGE AT MARRIAGE

Age at marriage is an intervening variable between social factors and fertility. A positive relationship between the two has been shown in the study by Balakrishnan, Ebanks and Grindstaff (1979:34). Still, according to them, the relationship is not that important when considering different religious groups. The variable operates in combination with many other socio-cultural factors, such as education, duration of marriage, labor force participation, type of residence, and religion. Davis and Blake (1956) describe the joint effect of other intermediate variables such as voluntary abstinence through different types of family structures, voluntary foetal mortality through abortion, the use and non-use of contraception and sterilization on fertility. Bogue (1969:636) also explains about the joint effect of contraception and age at marriage on fertility, the possibility of earlier marriage without the necessity of early onset of child-bearing in the younger child-bearing cohorts. Early age at marriage coupled with lower socio-economic status is strongly associated with shorter birth intervals, a larger desired family size, and higher ultimate fertility (Hawthorn 1970:89).

Henripin (1972:129) discusses the positive relationship between age at marriage and fertility. Henripin (1972:129) in his study shows that women who married under 20 in relation to the women who married between 20 and 24 years had an excess fertility of 24 to 35 percent. Those who married after 25 had a reduced fertility of 26 to 32 percent. There is a reduction of 46 to 52 percent, 68 to 72 percent and 83 to 89 percent in fertility for the women married between 30 and 34 years, 35 and 39 years and 40 and 44 years respectively. The same idea is given in the Intercom magazine (Vol.8). Henripin supposes that this type of effect is due to the other underlying factors inducing high fertility which is supported by the negative relationship between age at marriage and level of education.

Miller (1976) and Hill (1970) as mentioned in chapter 1, support the fact of concentration of births in the early stages of marital career with fewer children in the younger child-bearing cohorts. But in the case of the older child-bearing cohorts, Miller also thinks that the longer the people are married, the more children they have.

The above studies together make it difficult to come to a conclusion about the relationship between age at marriage and fertility due to the several variables affecting fertility along with age at marriage. So it may be *hypothesized that the relationship between age at marriage and fertility depends upon the cohort, socio-economic status and the religion he/she belongs to.*

B. ETHNICITY

Native born women have higher fertility than foreign born women or immigrants for all age groups, the difference being greater for the younger cohorts (Balakrishnan, Ebanks and Grindstaff 1979:66, Henripin, 1972:152, Kalbach and McVey 1979:106). According to Henripin, the highest fertility among the foreign born older women is found among women from Netherlands and Italy. Although older women from Italy, Poland and the Soviet Union have higher fertility than the Canadian born women, the younger cohorts from the same countries manifested lower fertility than their Canadian born counterparts (Henripin, 1972;162). According to Kalbach and McVey (1979:109), the Polish and the English had below average fertility. The Native Indians and Inuits had the highest fertility, although, among the women over 65, the French had the highest fertility. The French and the Dutch had fertility higher than the average levels. A recent study by Sharma (1980) also shows that the younger foreign born women have lower fertility than the native born and the older foreign born women have fertility very close to their native born counterparts. His study also supports the fact that immigrant women from higher fertility areas have higher fertility.

Hence we may *hypothesize that the fertility of the native-born women is higher than that of the foreign-born or the immigrants. Among these immigrants, we can expect higher fertility among the people from countries with higher*

fertility.

C. RELIGION

Religion is one of the more important variables affecting fertility. It demonstrates its effect even when other socio-economic variables are controlled. Research by Balakrishnan, Ebanks and Grindstaff (1979:38, 57) indicates that the fertility differential due to religion is considerable for the older cohorts (above 30) and that it narrows with the younger child-bearing cohorts among whom the fertility is almost identical.Both their study and Henripin's study (1972:202) state that the Hutterites and Mennonites have the highest fertility. Catholics come next. Mormons and Greek Orthodox women have intermediary level closer to Catholic women than to the Protestants. Kalbach and McVey (1979:107, 108) found that the Salvation Army had higher fertility than the Roman Catholics. The Pentacostals, below 45, had lower fertility than the Roman Catholics. But they had higher fertility when all the age groups were combined together. According to all these studies, the Jews have the lowest fertility, the Presbyterians following them for their low fertility. The former study by Henripin, shows that there is a convergence among all the religious groups. It is clear from these studies that higher fertility is among foreign born Catholics than among the foreign born Protestants, even in the young age groups. When the native born are considered, however, the older Catholic women had

higher fertility than the Protestants of their own age groups. At the same time, the younger Catholics, most of them being French-Canadians with their fertility lower than that of the foreign born Catholics, have lower fertility than their Protestant counterparts.

English-speaking Catholics have higher fertility than the English-speaking Protestants. Less educated Catholics of 35 years of age or more had higher fertility than that of the less educated Protestants of the same age group. But this difference does not exist among the younger age groups. Couples where both spouses are of high education had lower fertility than that of the couples of low education. Those couples with different educational status have intermediate fertility level with wife's education having the predominating effect in the age group under 35. Their study shows that these relationships persist even when the duration of marriage is controlled.

Thus it may be *hypothesized that we can expect lower fertility among the Protestants than among the Catholics even when other variables are controlled.*

D. TYPE OF RESIDENCE

Paul Shaw (1979:33, 34) in his monograph, makes it clear that the average family size of the Census farm population is larger than that of all Canada due to the lower cost of providing for the children and due to the greater economic utility of children on the farm than in the

urban areas. Many studies support higher family size in rural areas than in urban areas (Stinner 1977, Weller and Bouvier 1972, Kalbach and McVey 1979:102).

Balakrishnan, Ebanks and Grindstaff (1979) show that in 1971, the urban fertility ratios were about twenty-five percent lower than the rural fertility ratios. There is a strong inverse relationship between population size and fertility even when age, education, occupation and income are controlled (Balakrishnan, Ebanks and Grindstaff 1979:51). It was found that this inverse relationship persisted even after controlling for duration of marriage and mother tongue. It was also demonstrated that the effect of type of residence on fertility is less pronounced between rural non-farm and rural farm than between rural urban differences. The fertility is noticably higher only among the older cohorts of women of rural farm than among their rural non-farm counterparts (Balakrishnan, Ebanks and Grindstaff 1979:53-57, Henripin 1972:78).

Thus, assuming that the type of residence can be placed on a continuum, *an inverse relationship between type of residence and fertility may be hypothesized and that the relationship is stronger for the older cohorts.*

E. EDUCATION

Many studies have supported the inverse relationship of education with fertility - the difference being greater among the younger age groups due to the higher age at

marriage and higher education of these groups. This inverse relationship holds true even when age at marriage, duration of marriage, religion, labor force participation, migration status and income are controlled, although the effect of ethnicity is not as strong as that of the other factors (Balakrishnan, Ebanks and Grindstaff 1979:75, 78).

Kocher (1973:61) also shows the inverse relationship between education and fertility due to the positive relationship of education and labor force participation and knowledge of birth control devices. Henripin also notes the same type of results. His findings show that the effect of schooling is more pronounced after the secondary levels, among women in rural areas and among older women (Henripin 1972:242).

Janowitz (1976) found that there is an indirect effect of education on fertility at higher levels of wife's education. He found the direct effect stronger at lower levels of education. The direct effect of education was found varying systematically with husband's education if the education of the wife is low, but not if wife's education is high. The same idea is expressed by Kalbach and McVey (1979:111).

So in general, *an inverse relationship between education and fertility can be hypothesized.*

F. INCOME

Henripin's study (1972:285) shows an inverse relationship between family income and fertility among the 25-29 and 35-39 age groups and a positive relationship among the 45-49 age group. This inverse relationship between socio-economic status and fertility is shown in Stokes' study (1973) as well as in Kupinsky's study (1971).

Studies both by Sastry (1979) and Rao (1973) found a U-shaped relationship between income and fertility. The same kind of U-shaped relationship is seen between husband's income and fertility in Balakrishnan, Ebanks and Grindstaff's study (1979) as well as in Bernhardt (1972). A positive relationship between income and fertility is shown by Defronzo (1976) and Claim and Weininger (1973).

Easterlin (1975) said that the preference for children in comparison with other goods, is independent of household decisions. But Becker and Tomes (1976) showed an inverse relationship between income and fertility due to the positive relationship between desired expenditure per child and parental income.

Reed, Udry and Ruppert (1975) showed that fertility is related to relative income of husbands. Chaudhry (1977) found that relative income is more closely related to spacing than to cumulative fertility. But to Ewer and Gardner (1978), fertility is accounted for by wife's income. According to them, neither husband's income nor expected future income were significantly related to measures of

family size. The above studies do not help in coming to a conclusion regarding relationship between income and fertility. Regardless of that, it may be *hypothesized that a negative relationship between fertility and income can be expected because of the positive relationship between income and variables like education, density of population etc..*

Even though it is difficult to come to a conclusion about the relationship between fertility and the variables selected for this study due to different kinds of indirect effects of other variables, the general pattern of relationship between fertility and these socio-demographic variables can be as follows: A negative relationship between fertility and type of residence, education and income, higher fertility among the native-born than among the foreign-born, and lower fertility among the protestants than among the Catholics. The relationship between age at marriage and fertility may depend upon the cohort, socio-economic status and religion he/she belongs to.

III. DATA SOURCES AND STUDY METHODOLOGY

The general pattern of relationship between fertility and different socio-demographic variables in Canadian perspectives has been shown through many studies mentioned in Capter II. Thornton (1978), states that marital dissolution without remarriage leads to lower child bearing. The present tendency to bear children in the early stages of a marital career (Miller, 1976) and to have fewer children with smaller intervals between successive child births (Hill, 1970) makes it difficult to support Thornton's study. Under these circumstances, the pattern of relationship between fertility of the female lone parent and the different socio-demographic variables may or may not differ from that of the intact families, depending upon the stage in the child bearing cycle through which these women are passing at the time of the marital dissolution. The purpose of this study is to see whether they differ from females of intact families and even among themselves. This chapter deals with the methods through which this research is done.

A. DATA SOURCE AND SAMPLE DESIGN

The source of data to be used in this thesis is the family file of Public Use Sample Tape (PUST) provided by Statistics Canada from data collected during the 1971 Census. "The Public Use Sample Tape is a representative sample of individual records from the 1971 Census Master File. The primary sample size is one in one hundred. Data

from the long-form Census questionnaire or one-third sample, were used to create the Public Use Sample Tape" (Statistics Canada, 1975).

The Family File in the Public Use Sample Tape does not give categorization of the female lone parents as such. So a categorization of families on the bases of family status (FAMSTAT) and marital status of the heads of the families (MARHD) was done using four categories. (FAMSTAT and MARHD are two variables given in the Family File of the Public Use Sample Tape.) FAMSTAT refers to the classification of families into (i) husband-present families (referred to as intact families earlier and later in this thesis), or one parent families- (ii) male headed and (iii) female headed. Marital status of the head [MARHD] refers to the conjugal status of the head classified into (i) single, (ii) married, (iii) widowed, (iv) divorced and (v) separated.

In 1971, there were 3,975 lone parent families, comprising 7.9% of all the families in Canada. This excludes the still married with spouse absent and the never married single people without children heading the families. Of the lone parent families, 82.1% were female headed representing 6.5% of all the families in Canada. Of these female-headed lone parent families, widowed, divorced and separated comprise 55.8, 12.9 and 31.2 percent, respectively. (See Table 4.)

For the present study, the 1,822 widowed, 421 divorced and 1,020 separated female-headed lone parent families shown

Table 4.

Number and Percentage of Families in Different Categories of Family Status by Marital Status, in Canada: 1971.

Family Status	Single	Married	Widowed	Divorced	Separated	Total
Husband-Present		45565				45565
		99.3%				90.7%
Male-Headed	124	142*	373	116	223	978
	34.5%	0.3%	17.0%	21.6%	17.9%	2.0%
Female-Headed	235	178*	1822	421	1020	3676
	65.5%	0.4%	83.0%	78.4%	82.1%	7.3%
All Status	359	45885	2195	537	1243	50219
	100%	100%	100%	100%	100%	100%

Note: *Still married, but the spouse is absent.
Source: Public Use Sample Tape, 1971 Census of Canada.

in Table 4 and the 45,565 husband-present families are used when analysis is done with crosstabulations. To reduce the cost of the study, a further one percent of the 45,565 husband-wife families (470), or the intact families, were generated by a systematic sampling method for the regression analysis. This was done by selecting every third in thousand samples from them. This further sampling for regression analysis was not done in the case of any of the lone parent family categories.

Following are the tables and description of the proportional distribution of families for different categories of marital status in relation to the selected variables.

B. CHARACTERISTICS OF THE SAMPLES

The highest proportion of British families under different categories of marital status is in the divorced female lone parents with 55.8 percent. (See Table 5.) The second highest is in the separated female lone parents. The widowed female lone parents have the lowest percentage. The percentage for the intact families is in between the separated and the widowed.

The French has the highest percentage of families among the widowed. The percentage for the intact families and the separated is almost the same. The divorced have the lowest percentage of the French among them.

Table 5.

Percentage of Families by Ethnic Category and Marital Status, Canada: 1971.

Ethnic Group	Husband Present Families		Female Lone Parent Families			
	Females	Males	Widowed	Divorced	Separated	Total
British	45.3	44.5	43.4	55.8	48.4	46.6
French	27.2	26.7	32.4	15.4	28.2	28.9
German	6.8	7.0	5.9	8.6	4.7	5.9
Italian	3.4	3.8	2.5	1.4	1.7	2.1
Netherlands	1.9	1.9	0.9	2.6	1.9	1.4
Polish	1.5	1.6	1.5	1.4	1.2	1.4
Scandinavian	2.0	2.0	1.9	2.1	2.5	2.1
Ukrainian	3.0	3.1	2.7	2.6	2.7	2.7
All Other	9.0	9.3	8.7	10.0	8.7	8.9
N (Families)	45565	45565	1822	421	1020	3263

Source: Public Use Sample Tape, 1971 Census of Canada.

The divorced have the highest percentage of families among the Germans. Then comes the percentage for the males and the females of the intact families. The separated have the lowest percentage with the widowed coming in between the intact families and the separated.

Among the Italians, the females and the males of the intact families have higher percentage than that of the female lone parent categories. The divorced and the separated have very low percentage with the divorced in between the females of the intact families and the separated.

People of Netherland ethnic origin in Canada have a very low percentage of the widowed. The highest percentage is for the divorced. The percentage for the females of the intact families, males of the intact families and the separated is the same. The Polish and the Scandinavian families have almost the same percentage for all the categories of family status. The Ukrainians have little higher percentage for the intact families than that of the different categories of the female lone parents, the percentage for which is almost the same.

"Other" category includes Austria, Hungarian, Jewish, Russian, other European, Asiatic, Native Indian, other and unknown. The divorced has the highest percentage in this category. Then comes the males of the intact families followed by the females of the intact families. The widowed and the separated have the same percentage of "other"

category.

The highest percentage of families in all the marital statuses is under the Roman Catholic category. The widowed female lone parents have the highest percentage of Roman Catholic families among them (47%). (See Table 6.) Then comes the separated (45.9%). The females of the intact families and the males of the intact families have 43.4% and 42.5% of Roman Catholic respectively. The divorced female lone parents have the lowest percentage of families of Roman Catholics among them (25.2%).

The highest percentage of "other" category which includes Mormons, Mennonites, Hutterites and the like, is among the divorced female lone parents. The separated female lone parents and the males of the intact families have the same percentage of families in this category (5.6%). The widowed female lone parents and the females of the intact families have 4.7% and 6% respectively.

The highest percentage of the Jews with the lowest fertility according to the general theories, is among the divorced female lone parents (1.9%). Then comes the widowed female lone parents (1.7%). The males and the females of the intact families and the separated have the same percentage of "other category" (1.4%).

Table 7 shows that more than three quarters of the divorced female lone parents and the separated female lone parents reside in areas of more than 30,000 inhabitants. The divorced female lone parents has the highest percentage of

Table 6.

Percentage of Families by Religion and Marital Status, Canada: 1971.

Religion	Husband Present Families		Female Lone Parent Families			
	Females	Males	Widowed	Divorced	Separated	Total
Anglican	13.0	12.3	13.3	17.6	14.7	14.3
Baptist	3.3	3.2	3.3	5.0	3.6	3.6
Greek Orthodox	1.7	1.9	1.2	0.7	0.9	1.0
Jewish	1.4	1.4	1.7	1.9	1.3	1.6
Lutheran	4.0	4.0	3.8	4.8	2.8	3.6
Presbyterian	4.4	4.6	4.9	7.8	4.0	5.0
Roman Catholics	43.4	42.5	47.0	25.2	45.9	43.8
Ukrainian Catholics	1.1	1.2	1.8	0.7	0.5	1.2
United Church	18.6	17.9	16.4	22.1	16.3	17.1
No religion	3.2	5.3	1.9	6.7	4.4	3.3
Others	6.0	5.6	4.7	7.6	5.6	5.3
N (Families)	45565	45565	1822	421	1020	3263

Source: Public Use Sample Tape, 1971 Census of Canada.

Table 7.

Percentage of Families by Place of Residence and Marital Status, Canada: 1971.

Residence	Husband Present Families	Female Lone Parent Families			
	Males	Widowed	Divorced	Separated	Total
Rural Farm	6.2	3.8	0.5	0.4	2.3
Rural non-farm	16.6	17.6	5.9	8.9	13.4
Urban Below 30,000	19.6	20.1	16.2	14.9	2.3
Urban Above 30,000	57.6	58.5	77.4	75.8	66.3
N (Families)	45565	1822	421	1020	3263

Source: Public Use Sample Tape, 1971 Census of Canada.

families (77.4%) belonging to this category followed by separated female lone parents (75.8%). The percentage for the widowed female lone parents is also high (58.5%). The males of intact families have 57.6% residing in areas where there are more than 30,000 inhabitants.

In contrast to the foregoing category, the lowest percentage in the rural farm category, is found among the separated female lone parents with (0.4%) followed by the divorced (0.5%). The intact families have the highest percentage in this category with 6.2%, followed by the widowed with 3.8%.

Regarding the type of residence, the percentage of the divorced female lone parents and the separated female lone parents (5.9% and 8.9% respectively) residing in the non-farm rural area are lower than that for the intact families (16.6%). But the widowed female lone parents have a higher percentage (17.6%) than that of the intact families under this category.

Considering income, the widowed female lone parents (20.1%) represent the highest proportion of the female lone parents with an income below thirty thousand dollars. This is a little higher than that for the intact families (19.6%). The divorced female lone parents and the separated female lone parents have lesser percentages of families belonging to this category (16.2% and 14.9% respectively).

The distribution of families by level of education in relation to different marital statuses is shown in Table 8.

Table 8.

Percentage of Families by Education and Marital Status, Canada: 1971.

Education	Husband Present Families		Female Lone Parent Families			
	Females	Males	Widowed	Divorced	Separated	Total
No education	1.3	1.3	3.5	---	0.6	2.1
Elementary	33.1	37.7	52.2	21.9	36.5	43.4
Secondary	58.3	47.7	39.8	66.5	57.2	48.7
Some University	4.4	5.4	3.4	8.1	3.8	4.1
University Degree	2.8	7.9	1.1	3.6	2.0	1.7
N (Families)	45565	45565	1822	421	1020	3263

Source: Public Use Sample Tape, 1971 Census of Canada.

The highest percentage of families with university degree is among the males of intact families (7.9%). The percentage of families for the females of intact families with university degree is far behind (2.8%). Among the female lone parents, the divorced female lone parents has the highest percentage of families with university degree (3.6%). The separated female lone parents and the widowed female lone parents have 2% and 1.1% of families respectively with university education.

The divorced female lone parents has the highest percentage of families with "some university" education both when the female lone parents as well as the intact families are taken into consideration. The widowed female lone parents has the lowest percentage of families in this category (3.4%). The percentage for the separated female lone parents in this category is only a little larger than that for the widowed female lone parents (3.8%). The proportion of the males of intact families with "some university" (5.4%) is greater than that for the females of intact families (4.4%).

More than ninety percent of the families of different marital statuses fall between elementary and secondary education. The highest percentage of families with secondary education is among the divorced female lone parents (66.5%) and the lowest in the widowed female lone parents (39.8%). The percentage of families with secondary education for the females of intact families and the separated female lone

parents are almost the same with (58.3% and 57.2% respectively), which is higher than that for the males of intact families (47.7%).

When we consider the families with elementary education, the widowed female lone parents come first (52.2%) and the divorced female lone parents the last (21.9%). The percentage for the males of intact families, females of intact families and the separated female lone parents respectively are 37.7%, 33.1% and 36.5%.

The widowed female lone parents have the highest percentage of families with no education (3.5%) and the divorced female lone parents do not have any families in this category. The females of intact families and the males of intact families have the same number of families (1.3%) belonging to this category. The separated female lone parents have only 0.6% of this category.

Table 9 shows the distribution of families on the basis of income. It is clear from the table that the intact families have better income than the female lone parent families. Only 29.8% of the males of intact families earn $5,000 whereas 82.6%, 65.8% and 80.8% of widowed female lone parents, divorced female lone parents and separated female lone parents respectively belong to this category. Even at the $10-15,000 level, the difference is clear. Only 92.9% of the males of intact families are at this level when 99% of the widowed female lone parents, 98.5% of the divorced female lone parents and 99.6% of the separated female lone

Table 9.

Percentage of Families by Income and Marital Status, Canada: 1971.

Income Group	Husband Present Families		Female Lone Parent Families			
	Females	Males	Widowed	Divorced	Separated	Total
Under 1,000	62.1	3.7	15.4	13.1	19.8	16.5
1,000 - 5,000	28.4	26.1	67.2	52.7	61.0	63.4
5,000 - 10,000	8.6	47.2	14.6	28.7	17.5	17.3
10,000 - 15,000	0.7	15.9	1.8	4.0	1.3	1.9
15,000 - 20,000	0.1	4.0	0.6	0.5	0.3	0.5
20,000 - 25,000	---	1.5	0.3	0.2	0.2	0.2
25,000 - 30,000	---	0.7	0.1	---	---	0.1
30,000 - 35,000	---	0.4	---	0.2	---	---
35,000 - 40,000	14.0	0.2	0.1	0.5	---	0.1
40,000 - 45,000	---	0.1	0.1	---	---	---
45,000 - 50,000	---	0.1	--	---	---	---
Above 50,000	---	---	---	---	---	---
N	45565	45565	1822	421	1020	3263

Source: Public Use Sample Data, 1971 Census of Canada.

parents are at this level.

A close look at Table 10 shows that 94% of the divorced and the separated are married before the age of 30, whereas only 85.5% of the females of intact families are married before 30. Only 59.5% of the widowed are married before the age of 30.

Though the overall percentage of families for the females and the males of intact families who first married before the age of 30 is smaller than for the divorced and the separated female lone parents, the percentage of females in intact families who married between 20 and 24 is the highest for that specific age category. The males of intact families (31%) evidence the highest proportion of those marrying between the ages of 29 to 35. The widowed female lone parents come next (21.9%).

The divorced have the highest percentage of families who were first married between the ages of 15 and 19 (38.7%), followed by the separated female lone parents (36.7%). Only 19.8% of the females of intact families and 3.8% of the males of intact families were married between the ages of 15 and 19. Widowed female lone parents have 9.8% of families in this category.

C. VARIABLES

The description of the variables given below is taken from the Family File of the Public Use Sample Tape compiled by the Statistics Canada.

Table 10.

Percentage of Families by Age at First Marriage and Marital Status, Canada: 1971.

	Husband Present Families		Female Lone Parent Families			
Age at Marriage	Females	Males	Widowed	Divorced	Separated	Total
15-19	19.8	3.8	9.8	38.7	36.7	21.7
20-24	46.9	39.3	27.8	40.6	42.9	34.2
25-29	18.8	31.0	21.9	14.7	14.3	18.6
30-34	7.6	13.5	14.0	3.1	3.4	9.3
35-39	3.7	6.3	9.4	1.4	1.8	6.0
40-44	2.4	4.7	15.6	1.0	0.5	9.0
45+	0.8	1.4	1.4	0.5	0.4	1.0
N (Families)	45565	45565	1822	421	1020	3263

Source: Public Use Sample Tape, 1971 Census of Canada.

Dependent Variable:

The dependent variable to be studied is the *Number of children ever born (to wife or female head)[BABIES]*

Babies refer to the number of children born alive, whether for the present marriage or any previous marriages. Children who died after birth as well as those residing elsewhere at census time are also included. Adopted and step children are excluded. This is reported for women fifteen years and over who reported themselves as having been married at one time.

Independent Variables:

1. Ethnic or cultural group of head[CULTURHD]

This refers to ethnic or cultural background traced through the father's side. This question should not be confused with citizenship which refers to the country to which the person owes allegiance. Language spoken by the person or by his paternal ancestor on first coming to this continent was a guide to the determination of ethnic or cultural group in some cases, eg. an English-speaking Canadian-born person whose ancestors who used to speak Swedish was refered to as Scandinavian.

2. Ethnic or cultural group of spouse[CULTURSP]

This is traced through in the same manner it is done for the heads of the families.

3. Total income of head[INCHD]

This refers to the total income recieved by the head of the

family during the calendar year 1970 from wages and salaries, business or professional practice, farm operations, family and youth allowances, government old age pensions from previous employment, bond and deposit interest and dividends and other investment sources.

4. Total income of spouse[INCSP]

Estimated in the same way that it is determined for the heads of the families.

5. Level of schooling of head[EDUHD]

This refers to the highest grade or year of elementary school, secondary school or university attended, by the head of the family.

6. Level of schooling of wife[EDUSP]

This refers to the highest grade or year of elementary, secondary school or university attended by the wife of head of the family.

7. Religion(head)[RELHD]

This refers to the specific religious body, denomination, sect or community reported in answer to the question, "What is your religion?" Respondents were asked to give a specific denomination even if they did not attend a place of worship; although provision was made for marking "No religion" if the person considered this to be the appropriate answer.

8. Religion(wife)[RELSP]

Specified in the same way it is done for the heads of the families.

9. Place of residence of head: 1971[RESHD]

This refers to the place where the head of the family normally lives and sleeps (ie., his home). Persons are classified according to the size of the area of residence. The place of residence is grouped as urban (over 30,000 and under 30,000) and rural (non-farm and farm).

In addition to the variables indicated above, two other independent variables were constructed. They are:

1. Age at first marriage of head [AGEMARHD] and 2. Age at first marriage of spouse [AGEFMAR], the description of which is given below:

1. *Age at first marriage of head[AGEMARHD]*

computed by subtracting the completed years since first marriage of head [YEARSHD] from the age of the head at the time of the census [AGEHD].

YEARSHD is the number of completed years since the date of first marriage of the head. This is calculated from "Date of first marriage" for persons 15 years and over, who reported themselves as married, widowed, divorced or separated under "marital status". Persons under 15 years of age who reported themselves as "ever married" were classified as "single" when the questionnaire was edited.

AGEHD is the age of the head in completed years as of last birthday at the census date.

2. *Age at first marriage of spouse[AGEFMAR]*

This variable was computed in the same way it was done for the previous variable except that instead of the number of completed years since the date of first marriage of the head

and the age of the head, the number of completed years since the first marriage of spouse and actual age of spouse were implied. The number of completed years since first marriage of spouse and the age of the spouse were estimated in the same way the number of completed years since first marriage and age were estimated in the case of the heads of the families.

D. HYPOTHESES

1. The female lone parents, regarding general patterns of fertility, are similar to the females of intact families both when the Socio-demographic characteristics of the females of intact families and the Socio-demographic characteristics of the males of the intact families are taken into consideration. So it may be hypothesized that

1.1 the relationship between age at marriage and fertility depends upon the cohort, socio-economic status and the religion he/she belongs to.

1.2 the fertility of the native-born women is higher than that of the foreign-born or the immigrants. Among these immigrants, we can expect higher fertility among the people from countries with higher fertility.

1.3 a lower fertility can be expected among the Protestants than among the Catholics even when other variables are controlled.

1.4 assuming that the type of residence can be placed on a continuum an inverse relationship between type of

residence and fertility may be observed and that the relationship is stronger for the older cohorts.

1.5 an inverse relationship between education and fertility can be seen.

1.6 a negative relationship between fertility and income can be expected because of the positive relationship between income and variables like education, density of population etc.

2. The number of children ever born to the female lone parents differs from the number of children ever born to the females of intact families both when (a) Socio-demographic characteristics of the females of intact families and (b) the Socio-demographic characteristics of the males of the intact families are taken into consideration.

3. The female lone parents - the widowed female lone parents, divorced female lone parents and the separated female lone parents - differ among themselves in relation to the number of children ever born to them, when the socio-demographic characteristics are controlled. The difference among the female lone parents is thought to be prevailing on the basis of the assumption that the widowed, separated and the divorced respectively have the highest, middle and the lowest time spent in marriage.

The socio-demographic characteristics of the head or the spouse of a family in this thesis refer to his/her age at first marriage, the ethnic group he/she belongs to, his/her individual income, level of schooling, religion, and

place of residence.

E. METHODOLOGY

Cross tabulations, to show bivariate relationships between fertility and selected socio-demographic variables, are used in this study. Breakdowns giving the mean number of children for different categories of the variables are also used. Multiple regression analysis is another method applied in this thesis.

Multiple regression is a method of analyzing the collective and separate contributions of two or more independent variables to the variation of a dependent variable (Kerlinger and Pedhazur, 1973). No study has been done previously as to which of the variables selected for this study contributes more to explaining the fertility of lone parents. Instead of assuming the order of importance for the variables being used in the equation, stepwise regression is employed to show how strongly two or more variables are related, how much the variables contribute to explaining fertility and to know which of the variables contribute more and in what order when other variables are controlled for.

Since some of the variables selected for this study are categorical in nature, eg., religion of the head and spouse, and ethnicity of the head and spouse, the regression analysis is done with the help of selected dummy variables. In these four variables, the "other" category is kept as the

dummy group. The problem of multicollinearity does not exist in the present study as none of the variables are highly correlated. The highest simple *r* between the variables is 0.70564.

The equation for the female lone parents and for the males of the intact families is the following:

BABIES=a+b1 age at first marriage of the head
+b2 income of the head
+b3 education of the head
+b4 Anglican(head)
+b5 Baptist(head)
+b6 Greek Orthodox(head)
+b7 Jewish(head)
+b8 Lutheran(head)
+b9 Presbyterian(head)
+b10 Roman Catholics(head)
+b11 Ukrainian Catholics(head)
+b12 United Church(head)
+b13 No religion(head)
+b14 British(head)
+b15 French(head)
+b16 German(head)
+b17 Italian(head)
+b18 Netherlands(head)
+b19 Polish(head)
+b20 Scandinavian(head)
+b21 Ukrainian(head)

+b22 Type of residence(head)

In the equation for the females of intact families, the age, income, education; religion and ethnicity of the head are replaced by the age income, education, religion and ethnicity of the spouse. Type of residence is not included in the equation for the females of intact families due to the unavailability of such data .

The equation for the intact families, taking into consideration the socio-demographic characteristics of the females, as well as the males, of intact families, includes all the variables for both spouses.

Selection of variables for this research has been limited by the presentation of the census data. For example, the number of completed years since the date of the first marriage was not used. Some of the samples may have married more than once and been unmarried during this period. Such information is not provided in the Individual file of the Public Use Sample Tape, used as the data source here. There are some limitations to methods considered for application here, due to an insufficient number of cases. For example, cross tabulations showing bivariate relationships when controlling for other variables were not possible in some instances due to an insufficient number of cases. The number of variables selected for this study also introduces further limitations to the methods that could be applied. Multiple Classification Analysis could not be employed due to the number of variables used. Under these circumstances, the

methods applied here are the appropriate ones to analyze the data in the best way possible. The following chapter gives the analysis of the fertility of the female lone parents and intact families keeping in mind the hypotheses and the methods referred to in this chapter.

Footnote

The four categories of families and the way they are arrived at is given below:

intact families[HPFs] - The combination of husband-present families (part 1 of family status [FAMSTAT])with married(part 2 of MARHD) part of marital status,

widowed families[WFLPFs] - The combination of female-headed one parent families (part 3 of family status [FAMSTAT])with section of widowed in the marital status (part 3 of MARHD),

divorced families[DFLPFs] - The combination of female-headed one parent families (part 3 of family status [FAMSTAT] with part 4 of marital status[MARHD]

separated families[SFLPFs] - The combination of female headed one parent families (part 3 family status [FAMSTAT]) with part 5 of marital status [MARHD].

IV. ANALYSIS OF THE DATA

The objective of this study is to investigate the fertility of female lone parents with reference to the prevailing general fertility theories, with respect to the males and females of intact families, and in comparison with the different categories of female lone parents themselves. It is shown in Chapter III that cross tabulations portraying bivariate relationship between fertility and selected socio-demographic variables, breakdowns giving mean number of children for different categories of selected variables and stepwise regression are employed. Tables and discussions with a view to doing these comparisons are given in this chapter.

The description of the analysis will be found in two main sections - bivariate and regression analyses. Within each section, findings are presented on each of the selected variables given in the order of the hypotheses tested as shown in Chapter III.

A. BIVARIATE ANALYSIS

Following are the results and analysis of the bivariate relationship done for this study:

Age at First Marriage

Balakrishnan, Ebanks and Grindstaff (1979:34) and Henripin (1972:129) found a positive relationship between fertility and age at marriage. Davis and Blake (1956) and

Bogue (1969:636) talk about the joint effect of contraception and age at marriage; abortion and age at marriage on fertility; and the possibility of earlier marriage without the necessity of early onset of child-bearing in the younger generation. According to Hawthorn (1970:89), early age at marriage coupled with lower socio-economic status is strongly associated with shorter birth intervals, a high desired family size and, correspondingly higher ultimate fertility. Hill (1970) and Miller (1976) support the fact of concentration of births in the early stages of marital career with fewer children in the younger cohorts. Hence, one may say that the relationship between age at marriage and fertility depends upon the cohort, socio-economic status and the religion one belongs to.

The simple *r*s in Table 11 show that fertility and age at marriage are positively related in the case of the intact families when the age at marriage of both the male heads and the wives of the intact families are taken into consideration. They are positively related among the widowed female lone parents of the female lone parent category also. This is in accordance with the studies by Balakrishnan, Ebanks and Grindstaff (1979:34) and Henripin (1972:129). On the other hand, the divorced female lone parents, separated female lone parents and the female lone parents together show a negative relationship.

Table 11.

Simple *r* Between Age at Marriage and Number of Children, in Different Categories of Female Lone Parent Families and Intact Families, Canada: 1971.

Family Type	Simple r
Females of Intact Families	0.09106(1)
	0.09106(2)
Males of Intact Families	0.16552(1)
	0.02789(2)
Female Lone Parents	-0.18478
Widowed Female Lone Parents	0.01895
Divorced Female Lone parent	-0.14109
Separated Female Lone Parents	-0.10406

(1) When all the variables concerned both the heads and spouses are taken into consideration.

(2) Type of residence is not included as such information is not provided for the spouses of intact families.

Among the female lone parents, the relationship is the strongest among the divorced female lone parents, though as a whole it is the strongest among the males of intact families followed by the separated female lone parents and the females of intact families. The relationship is very weak among the widowed female lone parents.

The negative relationship between age at marriage and fertility among the divorced and separated female lone parents in comparison with the females and males of intact families and the widowed female lone parents, is in accordance with Hawthorn's statement of higher fertility among people with early age at marriage coupled with lower socio-economic status. The mean age at marriage of the divorced female lone parents and the separated female lone parents are 21.83 and 21.78 respectively. It is higher for the widowed female lone parents, females of intact families and the males of intact families. It is 28.74, 23.95 and 26.95 respectively for the widowed female lone parents, females of intact families and the males of intact families.

The mean family income of the divorced female lone parents ($5,242.71) and the Separated female lone parents ($4,081.76) is lower than that of the intact Families ($9,801.24) and the widowed female lone parent families ($6,603.89). The above description makes it clear that the divorced female lone parents and the separated female lone parents have a lower age at marriage and a lower economic status than that of the widowed female lone parents, females

of intact families and the males of intact families. However, this negative relationship in accordance with Hawthorn does not agree with the study by Hill (1970), who found fewer children among the younger generation with smaller intervals in between successive child-births. (The mean age for the divorced female lone parents and the separated female lone parents respectively are 38.74 and 38.26 whereas it is 57.75 for the widowed female lone parents and 44.47 and 41.49 respectively, for the males of intact families and the females of intact families.)

Table 12 showing the mean number of children also supports this. Some of the higher age at marriage group among the divorced female lone parents (30-34 and 40-44) and the separated female lone parents (45+) have fewer children than the widowed female lone parents or the male heads and wives of intact families. All the other age at marriage groups of the divorced female lone parents and the separated female lone parents have more children than that of the other marital status categories.

Considering hypothesis number two in relation to age at marriage, the lone parent families differ from the intact families in all the categories of age at marriage as can be seen from Table 13. When taken together as well as separately, the female lone parents have more children than the intact families except in two categories of the divorced female lone parents. As seen in Table 12, only the 30-34 and the 40-44 groups have fewer children than that of the intact

Table 12.

Mean Number of Children by
Age at First Marrige and Marital Status, Canada: 1971.

Age at Marriage	Husband Present Families		Female Lone Parent Families			
	Females	Males	Widowed	Divorced	Separated	Total
15-19	2.806	2.682	4.151	2.914	3.209	3.377
20-24	2.443	2.436	3.731	2.526	3.048	3.278
25-29	2.495	2.541	3.496	2.532	2.986	3.275
30-34	2.378	2.573	3.506	2.231	2.621	3.350
35-39	2.326	2.487	3.831	2.500	2.722	3.689
40-44	2.413	2.745	4.228	1.500	3.200	4.174
45+	1.779	1.524	3.231	2.000	1.250	2.906
N (Families)	45565	45565	1822	421	1020	3263

Source: Public Use Sample Tape, 1971 Census of Canada.

Table 13.

Pattern of Differentiation Between Female Lone Parents and Intact Families by Age at Marriage and Number of Children, Canada: 1971

Age Group	Marital Status	Chi Sq.	DF
15-19	Lone parents vs.		
	Females of Intact Families	93.16 *	6
	Lone parents separately vs.		
	Females of Intact Families	162.26 *	18
		125.62 **	15
	Lone parents vs.		
	Males of Intact Families	101.63 *	6
	Lone parents separately vs.		
	Males of Intact Families	166.89 *	18
		135.44 **	15
20-24	Lone parents vs.		
	Females of Intact Families	268.71 *	6
	Lone parents separately vs.		
	Females of Intact Families	395.99 *	18
		325.58 **	15
	Lone parents vs.		
	Males of Intact Families	270.49 *	6
	Lone parents separately vs.		
	Males of Intact Families	397.53 *	18
		332.98 **	15
25-29	Lone parents vs.		
	Females of Intact Families	131.21 *	6
	Lone parents separately vs.		
	Females of Intact Families	185.63 *	18
		70.10 **	9
	Lone parents vs.		
	Males of Intact Families	131.83 *	6
	Lone parents separately vs.		
	Males of Intact Families	188.01 *	18
		89.29 *	9
30-34	Lone parents vs.		
	Females of Intact Families	84.98 *	6
	Lone parents separately vs.		
	Females of Intact Families	105.87 *	18
		45.30 **	3
	Lone parents vs.		
	Males of Intact Families	72.62 *	6
	Lone parents separately vs.		
	Males of Intact Families	92.80 **	18
		26.91 **	3

Table 13. Contd.

Pattern of Differentiation Between Female Lone Parents and Intact Families by Age at Marriage and Number of Children, Canada: 1971

Age Group	Marital Status	Chi Sq.	DF
35-39	Lone parents vs. Females of Intact Families	80.51 *	6
	Lone parents separately vs. Females of Intact Families	111.98 * ***	18
	Lone parents vs. Males of Intact Families	81.39 * ***	6
	Lone parents separately vs. Males of Intact Families	115.17 * ***	18
40-44	Lone parents vs. Females of Intact Families	149.85 *	6
	Lone parents separately vs. Females of Intact Families	179.63 * ***	18
	Lone parents vs. Males of Intact Families	117.70 *	6
	Lone parents separately vs. Males of Intact Families	166.89 * ***	18
45+	Lone parents together vs. Females of Intact Families	68.52 *	6
		45.94 *	3
	Lone parents separately vs. Females of Intact Families	89.87 * ***	18
	Lone parents together vs. Males of Intact Families	27.11 *	6
		17.44 *	3
	Lone parents separately vs. Males of Intact Families	40.62 * ***	18

* Significant at 0.05 level.

** Observed Chi square when columns are collapsed to avoid cells with less than five cases.

*** Columns cannot be collapsed in such a manner to get the table with cells less than five cases.

families.

For the comparison indicated in hypothesis three, the female lone parents differ among themselves when we control for age at marriage, as can be seen in Table 14. In the 15-19 age group, the widowed differ both from the divorced and the separated. All the three groups differ from every other in 20-24 age group, but at the next age group, 25-29, the widowed female lone parents differ from the divorced female lone parents and the divorced female lone parents differ from the separated female lone parents. The widowed female lone parents differ from the separated female lone parents in the 35-39 group and the widowed female lone parents differ from the divorced female lone parents in both the 40-44, as well for the 45 and over groups.

The widowed female lone parents in all the significant differing groups have more children than the divorced and the separated female lone parents. The number of children the divorced female lone parents have is less than that of the separated female lone parents. The widowed female lone parents have greater percentage of older child-bearing cohorts among them. The mean age of widowed female lone parents is higher as well. This may be according to what is indicated by Hill (1970), fewer children among the younger generation of the divorced female lone parents or the separated female lone parents.

Table 14.

Pattern of Differentiation Among the Female Lone Parents by Age at Marriage and Number of Children, Canada: 1971.

Age Group	Marital Status	Chi Sq.	DF
15-19	Widowed vs. Divorced	45.62 *	
		45.58 **	5
	Widowed vs. Separated	37.63 *	6
		37.48 **	5
20-24	Widowed vs. Divorced	67.99 *	6
		64.90 **	5
	Widowed vs. Separated	45.15 *	6
	Divorced vs. Separated	17.55 *	6
		17.42 **	5
25-29	Widowed vs. Divorced	29.69 *	6
		28.75 **	4
	Divorced vs. Separated	12.67 *	6
		11.25 **	4
35-39	Widowed vs. Separated	17.62 *	6
		1.62 **	1
40-44	Widowed vs. Divorced	29.46 *	6
		***	
45+	Widowed vs. Divorced	15.88 *	6

* Significant at 0.05 level

** Observed Chi square when columns are collapsed to avoid cells with less than five cases.

*** Columns cannot be collapsed in such a manner to get the table with cells less than five cases.

Ethnicity

The native born are expected to have higer fertility than that of the foreign born (Balakrishnan, Ebanks and Grindstaff 1979:66; Kalbach and McVey 1979:106). But the categorization of ethnic or cultural group does not show the native-born separately. The study by Sharma (1980) shows that among the foreign born, people from countries of higher fertility have higher fertility even as immigrants or citizens of Canada. According to Henripin (1972:152), the highest fertility among the foreign born older women is found among the women from Netherlands and Italy. High fertility is expected among women from Poland and Soviet Union as well. Table 15 shows that females of intact families with Netherland ethnic origin have the highest fertility both when the ethnic origin of females as well as males of intact families are taken into consideration. In contrast to Henripin's findings, excluding the category of others, women of Italian ethnic origin have the lowest fertility both when the ethnic origin of the females and males of intact families are considered. The second highest fetility in the intact families (both for the females and males) is among the French women. This is in accordance with Kalbach and McVey (1979:109). The Germans come next.

When the female lone parents together are taken into consideration women of French origin have the highest fertility in accordance with Kalbach and McVey's study (1979:109), although it is different when they are

Table 15.

Mean Number of Children by Ethnicity and Marital Status, Canada: 1971.

Ethnic Group	Husband Present Families		Female Lone Parent Families			
	Females	Males	Widowed	Divorced	Separated	Total
British	2.387	2.395	3.554	2.723	3.018	3.252
French	2.777	2.796	4.263	2.600	3.149	3.808
German	2.484	2.482	3.676	2.750	2.813	3.287
Italian	2.341	2.304	3.533	2.167	2.824	3.235
Netherlands	3.002	2.830	3.765	2.818	2.842	3.170
Polish	2.407	2.321	2.750	2.833	3.500	2.957
Scandinavian	2.447	2.401	3.886	2.556	3.880	3.348
Ukrainian	2.367	2.458	3.180	3.546	3.179	3.225
Others	2.286	2.261	3.478	2.071	3.315	3.224
N (Families)	45565	45565	1822	421	1020	3263

Source: Public Use Sample Tape, 1971 Census of Canada.

considered separately. Only the widowed female lone parents have the highest fertility among the women of French origin. Among the divorced female lone parents, the highest fertility is among the Ukrainians. The highest fertility among the separated female lone parents is among the women of Scandinavian origin.

The concept of lowest fertility among the Jews seems to hold true among the intact families. The 'other' category which includes the Jews, has the lowest fertility among them. The lowest fertility among the widowed, divorced, and the separated female lone parents respectively is among the people of Polish, Italian and German ethnic origin. The female lone parents as a whole has the lowest fertility among the Polish.

Coming to hypothesis number two, the female lone parents separately and as a whole differ significantly from the intact families in all the categories of ethnicity except among the people of Netherlands and Polish ethnic origin (see Table 16). The heads as well as the spouses of Intact families have lower fertility than all the different categories of female lone parents except among the Italian divorced female lone parents and all the categories of female lone parents of Netherland ethnic origin.

From the above Chi square differences it may be said that the ethnicity of the male heads of the intact families are more important than that of their spouses except among the French and the Ukrainians.

Table 16.

Pattern of Differentiation Between Female Lone Parents and Intact Families by Ethnicity and Number of Children, Canada: 1971.

Ethnicity	Marital Status	Chi Sq.	DF
British	Lone Parents vs. Females of Intact Families	409.69 *	6
	Lone Parents separately vs. Females of Intact Families	345.38 *	18
		238.14 **	15
	Lone Parents vs. Males of Intact Families	402.71 *	6
	Lone Parents separately vs. Males of Intact Families	535.33 *	18
		424.96 **	15
French	Lone Parents vs. Females of Intact Families	250.29 *	6
	Lone Parents separately vs. Females of Intact Families	406.50 *	18
		332.76 **	12
	Lone Parents vs. Males of Intact Families	238.13 *	6
	Lone Parents separately vs. Males of Intact Families	392.00 *	18
		324.21 **	12
German	Lone Parents vs. Females of Intact Families	52.17 *	6
		37.94 **	5
	Lone Parents separately vs. Females of Intact Families	86.04 *	18
		47.65 **	9
	Lone Parents vs. Males of Intact Families	54.48 *	6
		38.95 **	5
	Lone Parents separately vs. Males of Intact Families	89.85 *	18
		65.50 **	9
Italian	Lone Parents vs. Females of Intact Families	41.61 *	6
		36.67 **	5
	Lone Parents separately vs. Females of Intact Families	73.61 *	18
		***	
	Lone Parents vs. Males of Intact Families	45.45 *	6
		39.92 **	5
	Lone Parents separately vs. Males of Intact Families	78.44 *	18
		***	

Table 16. Contd.

Pattern of Differentiation Between Female Lone Parents and Intact Families by Ethnicity and Number of Children, Canada: 1971.

Ethnicity	Marital Status	Chi Sq.	DF
Scandinavian	Lone Parents vs. Females of Intact Families	23.27 *	6
		18.37 **	4
	Lone Parents separately vs. Females of Intact Families	39.31 *	18
		***	
	Lone Parents vs. Males of Intact Families	26.35 *	6
		20.12 **	4
	Lone Parents separately vs. Males of Intact Families	45.94 *	18
		***	
Ukrainian	Lone Parents vs. Females of Intact Families	27.58 *	6
		24.20 **	5
	Lone Parents separately vs. Females of Intact Families	39.78 *	18
		***	
	Lone Parents vs. Males of Intact Families	22.90 *	6
		19.36 **	5
	Lone Parents separately vs. Males of Intact Families	34.23 *	18
Others	Lone Parents vs. Females of Intact Families	90.95 *	6
	Lone Parents separately vs. Females of Intact Families	123.86 *	18
		89.75 **	9
	Lone Parents vs. Males of Intact Families	80.90 *	6
	Lone Parents separately vs. Males of Intact Families	128.63 *	18
		96.23 **	9

* Significant at 0.05 level.

** Observed Chi square when columns are collapsed to avoid cells with less than five cases.

*** Columns cannot be collapsed in such a manner to get the table with cells less than five cases.

Table 17 shows how the female lone parents differ among themselves in number of children when controlling is done for ethnicity in relation to the third hypothesis. In all the significantly differing groups, the widowed female lone parents, as was seen in the case of age at marriage, have the greatest number of children among the female lone parents followed by the separated female lone parents. The divorced female lone parents have the least number of children. (see Tables 9 and 15).

Education

The inverse relationship of education with fertility is supported by many studies. Kocher (1973:61) shows the inverse relationship between these two variables due to the positive relationship between education, labor force participation and knowledge of birth control devices. Henripin (1972:242) also notes the same type of results. His findings show that the effect of schooling is more pronounced after the secondary levels, among women in rural areas and among older women. Balakrishnan, Ebanks and Grindstaff (1979:75, 78) also found this inverse relationship being greater among the younger generation. They found that this relationship holds even when age at marriage, duration of marriage, religion, and income are controlled.

Table 18 shows that the female lone parent Families in their fertility pattern are similar to the intact families

Table 17.

Pattern of Differentiation Among the Female Lone Parents by Ethnicity and Number of Children, Canada: 1971.

Ethnicity	Marital Status	Chi Sq.	DF
British	Widowed vs. Divorced	52.14 **	6
		47.39 *	5
	Widowed vs. Separated	48.82 *	6
		37.36 *	5
French	Widowed vs. Divorced	59.78 *	6
		53.55 **	4
	Widowed vs. Separated	74.85 *	6
	Divorced vs. Separated	14.82 *	6
		11.68 **	4
German	Widowed vs. Divorced	14.56 *	6
		10.04 **	3
Others	Widowed vs. Divorced	34.27 *	6
		7.64 **	3
	Divorced vs. Separated	17.04 *	6
		15.12 **	3

* Significant at 0.05 level.

** Observed Chi square when columns are collapsed to avoid cells with less than five cases.

Table 18.

Simple *r* Between Education and Number of Children, in Different Categories of Female Lone Parent Families and Intact Families, Canada: 1971.

Marital Status	Simple r
Females of Intact Families	-0.29574(1) -0.29574(2)
Males of Intact Families	-0.22501(1) -0.22061
Female Lone Parents	-0.22863
Widowed	-0.23730
Divorced	-0.12785
Separated	-0.22522

(1) When all the variables concerned both the heads and spouses are taken into consideration.

(2) Type of residence is not included as such information is not provided for the females of intact families.

in relation to the effects of education. The relationship is negative in every category of marital status. This negative pattern can be clearly understood from the decreasing mean number of children as the level of education goes higher (see Table 19). Though the relationship is negative in all the marital statuses, among the divorced female lone parents the correlation is not as strong as it is in the other categories of female lone parents. The relationship is stronger among the females and males of intact families than it is among the female lone parents. This may be due to the higher age at marriage of the females of intact families and males of intact families as mentioned in Balakrishnan, Ebanks and Grindstaff's study (1979:75, 78). The males of intact families have the highest percentage (7.9%) of the ones with University Degree education levels though their spouses do not. Though the correlation is almost the same in all the categories among the female lone parents, it is the strongest in the separated female lone parents.

Table 20 shows that the female lone parents as a whole and separately differ from the Intact Families at the elementary, secondary, some university and university level. But at the no education level, they differ only from the females of intact families separately and together. They do not differ from the males of intact families at this level. At all the levels, the female lone parents, except the divorced at the elementary level, have higher fertility than the females and the males of intact families of the same

Table 19.

Mean Number of Children by Education and Marital Status, Canada: 1971.

Education	Husband Present Families		Female Lone Parent Families			
	Females	Males	Widowed	Divorced	Separated	Total
No education	3.268	3.535	4.391	---	2.833	4.257
Elementary	3.063	3.018	4.131	2.848	3.613	3.912
Secondary	2.252	2.219	3.355	2.661	2.772	3.018
Some University	1.974	1.954	2.887	2.294	2.564	2.644
University Degree	1.552	1.949	2.350	2.200	2.800	2.473
N (Families)	45565	45565	1822	421	1020	3263

Source: Public Use Sample Tape, 1971 Census of Canada.

Table 20.

Pattern of Differentiation Between Female Lone Parent Families and Intact Families by Education and Number of Children, Canada: 1971.

Education	Marital Status	Chi Sq.	DF
No Education	Female Lone Parents Together vs. Females of Intact Families	15.02 *	6
		14.10 **	5
	Female Lone Parents Separately vs. Females of Intact Families	24.47 *	18
		***	
Elementary	Female Lone Parents Together vs. Females of Intact Families	289.08 *	6
	Female Lone Parents Separately vs. Females of Intact Families	379.07 *	18
		293.47 **	12
	Female Lone Parents Together vs. Males of Intact Families	322.33 *	6
	Female Lone Parents Separately vs. Males of Intact Familiies	414.63 *	18
		320.71 **	12
Secondary	Female Lone Parents Together vs. Females of Intact Families	365.38 *	6
	Female Lone Parents Separately vs. Females of Intact Families	482.43 *	18
		361.39 **	15
	Female Lone Parents Together vs. Males of Intact Families	390.84 *	6
	Female Lone Parents Separately vs. Males of Intact Families	511.85 *	18
		395.17 **	15

Table 20. Contd.

Pattern of Differentiation Between Female Lone Parent Families and Intact Families by Education and Number of Children, Canada: 1971.

Education	Marital Status	Chi Sq.	DF
Some University	Female Lone Parents Together vs. Females of Intact Families	164.26 *	6
		141.95 **	4
	Female Lone Parents Separately vs. Females of Intact Families	182.36 *	18
		144.84 **	6
	Female Lone Parents Together vs. Males of Intact Families	47.74 *	6
		21.93 **	4
	Female Lone Parents Separately vs. Males of Intact Families	66.51 *	18
		25.85 **	6
University Degree	Female Lone Parents Together vs. Females of Intact Families	59.97 *	6
		47.96 **	4
	Female Lone Parents Separately vs. Females of Intact Families	73.59 *	18
		12.26 **	3
	Female Lone Parents Together vs. Males of Intact Families	16.88 *	6
		6.26 **	4
	Female Lone Parents Separately vs. Males of Intact Families	27.47 *	18
		3.65 **	3

* Significant at 0.05 level.

** Observed Chi square when columns are collapsed to avoid cells with less than five cases.

*** Columns cannot be collapsed.

education category. At no education level, the males of intact families have more children than the females of intact families. From elementary level to some university level, the males of intact families have less children than the females of intact families. Again at the University level, the males of intact families have more children than the females of intact families. So it may be said (from the mean number of children as well as from the Chi square differences) that the education of the male heads of the family has more importance than that of their female spouses in keeping the family small at the elementary, secondary and some university levels. At the University level, education of their female spouses is more important.

The pattern of differentiation among the female lone parents in relation in fertility and education is shown in Table 21 (the type of comparison needed to test hypothesis number three). Each group differs from the other when the families of the elementary education category are taken into consideration. The families of different categories of female lone parents do not differ among themselves when the no education, some university and university groups are considered. Among the secondary group, the widowed differ both from the divorced as well as the separated. Thus it is evident that the difference is greatest between the widowed and the divorced and it is the least between the divorced female lone parents and the separated female lone parents.

Table 21.

Pattern of Differentiation Among Female Lone Parents by Education and Number of Children, Canada: 1971.

Education Level	Groups	Chi Sq. #	DF
Elementary	Widowed vs. Divorced	43.15 *	6
		42.76 **	4
	Widowed vs. Separated	32.77 *	6
	Divorced vs. Separated	22.32 *	6
		14.70 **	4
Secondary	Widowed vs. Divorced	49.73 *	6
		41.47 **	5
	Widowed vs. Separated	53.49 *	6

* Significant at 0.05 level.

** Observed Chi square when columns are collapsed to avoid cells with less than five cases.

Religion

Catholics are hypothesized to have higher fertility than the the Protestants. This higher fertility among the Catholics holds true in the case of the intact families. Table 22 shows that the females of intact families of Roman Catholic belief stand second only to the other category which includes Hutterites, Mennonites and Mormons who have the highest fertility which is in accordance with the studies by Balakrishnan, Ebanks and Grindstaff (1979:38, 57) and Henripin (1972:202). The Ukrainian Catholics are slightly behind the Baptist in females of intact families. But the Roman Catholic males of intact families have the highest fertility. Then comes the 'other' category. The Ukrainian Catholics have the third highest fertility in the males of intact families.

In the case of the widowed female lone parents also, the Roman Catholics have the highest fertility followed by the 'others' category. The Baptists have the third highest fertility among the widowed female lone parents as it was in the case of the females of intact families. Ukrainian Catholics of the widowed female lone parents fall far behind in this case. They are higher than only the Jews who have the lowest fertility.

Ukrainian Catholics have the highest, Presbyterians have the second highest fertility in the divorced female lone parents. The Roman Catholics and the 'others' category have very low fertility in the case of the divorced female

Table 22.

Mean Number of Children by Religion and Marital Status, Canada: 1971.

Religion	Husband Present Families		Female Lone Parent Families			
	Females	Males	Widowed	Divorced	Separated	Total
Anglican	2.336	2.328	3.399	2.838	3.060	3.201
Baptist	2.498	2.499	3.590	2.810	3.270	3.353
Greek Orthodox	2.173	2.210	3.318	1.000	2.333	2.853
Jewish	1.899	1.879	2.645	2.250	2.462	2.539
Lutheran	2.250	2.305	3.304	2.450	2.448	2.949
Presbyterian	2.141	2.152	3.348	2.909	2.927	3.153
Roman Catholics	2.713	2.719	4.215	2.679	3.214	3.773
Ukrainian Catholics	2.445	2.518	3.094	3.667	3.000	3.125
United Church	2.353	2.380	3.341	2.624	2.886	3.086
No religion	1.995	2.069	3.343	2.321	2.822	2.861
Others	2.734	2.711	3.753	2.469	3.228	3.345
N (Families)	45565	45565	1822	421	1020	3263

Source: Public Use Sample Tape, 1971 Census of Canada.

lone parents.

Among the separated female lone parents, the Baptists have the highest fertility with the 'other' category coming next. The Roman Catholics have the third highest fertility. The Ukrainian Catholics come after the the Anglicans who stand after the Roman Catholics.

The Jews have the lowest fertility in all the categories except among the divorced female lone parents and the separated female lone parents.

Table 23 shows how the female lone parents differ from the intact families regarding number of children in connection with religion in relation to the kind of comparison shown in hypothesis number two.

Considering hypothesis number three, the female lone parents, when controlled for religion, differ among themselves in a way shown in Table 24. Among the Anglicans, the widowed female lone parents differ both from the divorced and the separated female lone parents. All the three categories differ from one another among the Roman Catholics. Only the widowed and the divorced female lone parents differ from each other among the people of United Church. Among 'others', the widowed female lone parents differ from the divorced female lone parents, and the divorced female lone parents differ from the separated female lone parents

Regarding religion, the widowed female lone parents have more children than the separated female lone parents

Table 23.

Pattern of Differentiation Between Female Lone Parents and Intact Families by Religion and Number of Children, Canada: 1971.

Religion	Groups	Chi Sq. #	DF
Anglican	Female Lone Parents Together vs. Females of Intact Families	138.34 *	6
	Female Lone Parents Separately vs. Females of Intact Families	180.55 *	18
		103.94 **	12
	Female Lone Parents Together vs. Males of Intact Families	136.80 *	6
	Female Lone Parents Separately vs. Males of Intact Families	215.13 *	18
		112.61 **	12
Baptist	Female Lone Parents Together vs. Females of Intact Families	30.80 *	6
	Female Lone Parents Separately vs. Females of Intact Families	40.43 *	18
		24.13 **	6
	Female Lone Parents Together vs. Males of Intact Families	31.21 *	6
	Female Lone Parents Separately vs. Males of Intact Families	40.70 *	18
		22.63 **	6
Greek Orthodox Jews	Female Lone Parents Together vs. Females of Intact Families	14.03 *	6
	Female Lone Parents Together vs. Females of Intact Families	15.17 *	6
	Female Lone Parents Together vs. Males of Intact Families	15.95 *	6
	Female Lone Parents Separately vs. Males of Intact Families	92.80 *	18
		26.91 **	3
Lutheran	Female Lone Parents Together vs. Females of Intact Families	31.44 *	6
	Female Lone Parents Separately vs. Females of Intact Families	50.04 *	18
		26.52 **	6
	Female Lone Parents vs. Males of Intact Families	27.70 *	6
	Female Lone Parents Separately vs. Males of Intact Families	45.84 *	18
		24.55 **	6

Table 23. Contd.

Pattern of Differentiation Between Female Lone Parents and Intact Families by Religion and Number of Children, Canada: 1971.

Religion	Groups	Chi Sq. #	DF
Presbyterian	Female Lone Parents Together vs. Females of Intact Families	61.00 *	6
	Female Lone Parents Separately vs. Females of Intact Families	76.11 *	18
		52.60 **	9
	Female Lone Parents Together vs. Males of Intact Families	60.95 *	6
	Female Lone Parents Separately vs. Males of Intact Families	76.78 *	18
		50.01 **	9
Roman Catholic	Female Lone Parents Together vs. Females of Intact Families	429.90 *	6
	Female Lone Parents Separately vs. Females of Intact Families	644.00 *	18
		513.18 **	12
	Female Lone Parents Together vs. Males of Intact Families	422.79 *	6
	Female Lone Parents Separately vs. Males of Intact Families	635.30 *	18
		508.62 **	12
United Church	Female Lone Parents Together vs. Females of Intact Families	125.50 *	6
	Female Lone Parents Separately vs. Females of Intact Families	165.09 *	18
		125.00 **	15
	Female Lone Parents Together vs. Males of Intact Families	119.28 *	6
	Female Lone Parents Separately vs. Males of Intact Families	155.64 *	18
		114.62 **	15
No Religion	Female Lone Parents Together vs. Females of Intact Families	42.25 *	6
	Female Lone Parents Separately vs. Females of Intact Families	58.58 *	18
		26.35 **	9
	Female Lone Parents Together vs. Males of Intact Families	35.29 *	6
	Female Lone Parents Separately vs. Males of Intact Families	53.65 *	18
		22.76 **	9

Table 23. Contd.

Pattern of Differentiation Between Female Lone Parents and Intact Families by Religion and Number of Children, Canada: 1971.

Religion	Groups	Chi Sq. #	DF
Others	Female Lone Parents Together vs. Females of Intact Families	25.72 *	6
	Female Lone Parents Separately vs. Females of Intact Families	54.34 *	18
		21.42 **	6
	Female Lone Parents Together vs. Males of Intact Families	26.22 *	6
	Female Lone Parents Separately vs. Males of Intact Families	55.07 *	18
		13.60 **	6

* Significant at 0.05 level.

** Observed Chi square when columns are collapsed to avoid cells with less than five cases.

Table 24.

Pattern of Differentiation Among Female Lone Parents by Religion and Number of Children, Canada: 1971.

Religion	Groups	Chi Sq.		DF
Anglican	Widowed vs. Divorced	24.29	*	6
			**	4
	Widowed vs. Separated	14.87	*	6
			**	5
Roman Catholic	Widowed vs. Divorced	75.48	*	6
			**	4
	Widowed vs. Separated	96.89	*	6
	Divorced vs. Separated	14.94	*	6
			**	4
United Church	Widowed vs. Divorced	19.07	*	6
			**	5
Others	Widowed vs. Divorced	22.63	*	6
			**	2
	Divorced vs. Separated	16.10	*	6
	Widowed vs. Divorced		*	6
			**	2

* Significant at 0.05 level.

** Observed Chi square when columns are collapsed to avoid cells with less than five cases.

followed by the divorced female lone parents.

Type of residence

Many studies support an inverse relationship between fertility and density of population (Stinner 1977; Weller and Bouvier 1972; Balakrishnan, Ebanks and Grindstaff 1979:51; Paul Shaw 1979:33, 34; Henripin 1972:78). This inverse relationship is further supported by the 1971 Census of Canada data as revealed in Table 25.

Table 26 shows that all the categories of female lone parents identify themselves with the general pattern of negative relationship with type of residence and fertility. Among the female lone parents, the relationship is strongest in the Widowed female lone parents, followed by the Separated female lone parents. Although the relationship is negative in the case of the divorced female lone parents, it is not as strong as it is in the case of other categories.

Together, as well as separately, the female lone parent families differ from the intact families regarding fertility in relation to the type of residence the males of intact families belong to. The Chi square shows that the most significant difference is between the female lone parents and the males of intact families in the 'above 30,000' group.

Tables 27 and 28 show the pattern of differentiation in fertility among the female lone parents regarding type of residence. It is clear from the table that the difference is

Table 25.

Mean Number of Children by Type of Residence and Marital Status, Canada: 1971.

Residence	Husband Present Families	Female Lone Parent Families			
	Males	Widowed	Divorced	Separated	Total
Rural farm	3.344	4.386	1.000	5.000	4.329
Rural non-farm	2.969	4.509	2.520	3.429	4.170
Urban Below 30,000	2.646	3.795	2.897	3.257	3.551
Urban Above 30,000	2.226	3.498	2.626	2.983	3.183
N (Families)	45565	1822	421	1020	3263

Source: Public Use Sample Tape, 1971 Census of Canada.

Table 26.

Simple *r* Between Type of Residence and Number of Children in Different Categories of Female Lone Parent and Intact Families, Canada: 1971.

Groups	Simple r
Males of Intact Families	-0.22501* -0.22061
Female Lone Parent Families	-0.22863
Widowed	-0.23730
Divorced	-0.12785
Separated	-0.22522

* When all the variables concerned both the heads and spouses are taken into consideration.

Table 27.

Pattern of Differentiation Between Female Lone Parents and Intact Families by Type of Residence and Number of Children, Canada: 1971.

Type of Residence	Groups	Chi Sq. #	DF
Rural farm	Female Lone Parents Together vs. Males of Intact Families	27.98 *	6
		27.90 **	5
	Female Lone Parents Separately vs. Males of Intact Families	58.55 *	18
		***	
Rural non-farm	Female Lone Parents Together vs. Males of Intact Families	178.06 *	6
	Female Lone Parents Separately vs. Males of Intact Families	243.70 *	18
		173.73 **	9
Below 30,000	Female Lone Parents Together vs. Males of Intact Families	138.51 *	6
	Female Lone Parents Separately vs. Males of Intact Families	194.62 *	18
		175.61 **	15
Above 30,000	Female Lone Parents Together vs. Males of Intact Families	731.22 *	6
	Female Lone Parents Separately vs. Males of Intact Families	910.46 *	18

* Significant at 0.05 level.

** Observed Chi square when columns are collapsed to avoid cells with less than five cases.

*** Columns cannot be collapsed in such a manner to get the table with cells less than five cases.

Table 28.

Pattern of Differentiation Among Female Lone Parents by Type of Residence and Number of Children, Canada: 1971.

Type of Residence	Groups	Chi Sq. #	DF
Rural farm	Widowed vs. Divorced	35.32 *	6
		***	
Rural non-farm	Widowed vs. Divorced	33.05 *	6
		30.11 **	3
	Widowed vs. Separated	31.05 *	6
		27.25 **	5
Below 30,000	Widowed vs. Divorced	22.52 *	6
		18.52 **	5
	Widowed vs. Separated	19.66 *	6
		18.23 **	5
Above 30,000	Widowed vs. Separated	68.57 *	6
	Widowed vs. Separated	47.45 *	6
	Divorced vs. Separated	16.66 *	6

* Significant at 0.05 level.

** Observed Chi square when columns are collapsed to avoid cells with less than five cases.

*** Columns cannot be collapsed in such a manner to get the table with cells less than five cases.

more prominant between widowed and the divorced female lone parents than among the other two combinations - widowed female lone parents vs. separated female lone parents and divorced female lone parents vs. separated female lone parents. The widowed female lone parents differ from the divorced female lone parents in all the categories of type of residence. They differ from the separated female lone parents in categories of rural non-farm, below 30,000 and above 30,000. The divorced female lone parents differ from the separated female lone parents only in the communities above 30,000.

Income

In Chapter III, it is stated that a negative relationship can be expected because of the positive relationship between income and some of the variables like education, density of population, and so on.

The expected negative relationship between income and fertility holds true, as can be seen from Tables 29 and 30. The relationship is negative in all the categories of marital status. Although it is negative, the relationship among the divorced and the separated female lone parents is not as strong as it is in the case of the females of intact families. In addition, it is not very strong among the males of intact families.

Table 31 shows the pattern of differentiation between the intact families and the female lone parent families in

Table 29.

Simple *r* Between Individual Income and Number of Children in Different Categories of Female Lone Parent and Intact Families, Canada: 1971.

Marital Status	Simple r
Females of Intact Families	-0.22615* -0.22615**
Males of Intact Families	-0.04622* -0.00758
Female Lone Parents	-0.11648
Widowed	-0.17050
Divorced	-0.04758
Separated	-0.00107

* When all the variables concerned both the heads and spouses are taken into consideration.

** Type of residence is not included as such information is not provided for the spouses of Intact Families.

Table 30.

Mean Number of Children by Income and Marital Status, Canada: 1971.

Income	Husband Present Families		Female Lone Parent Families			
	Females	Males	Widowed	Divorced	Separated	Total
Under 1,000	2.804	2.616	3.932	2.200	3.015	3.410
1,000-5,000	2.157	2.693	3.936	2.851	3.151	3.583
5,000-10,000	1.483	2.351	3.023	2.471	2.927	2.874
10,000-15,000	1.842	2.521	2.594	2.765	2.385	2.597
15,000-20,000	2.106	2.611	2.636	2.500	2.000	2.500
20,000-25,000	2.250	2.693	4.200	2.000	3.000	3.625
25,000-30,000	1.714	2.794	3.000	---	---	3.000
30,000-35,000	1.800	2.919	---	2.000	---	2.000
35,000-40,000	1.400	2.873	5.000	4.500	---	4.667
40,000-45,000	---	2.824	2.000	---	---	2.000
45,000-50,000	---	3177	---	---	---	---
Above 50,000	---	3.467	---	---	---	---
N (Families)	45565	45565	1822	421	1020	3263

Source: Public Use Sample Tape, 1971 Census of Canada.

Table 31.

Pattern of Differentiation Between Female Lone Parents and Intact Families by Individual Income and Number of Children, Canada: 1971.

Income	Groups	Chi Sq.#	DF
Under 1	Female Lone Parents Together vs. Females of Intact Families		6
	Female Lone Parents Separately vs. Females of Intact Families	186.34 *	18
		135.24 **	9
	Female Lone Parents Together vs. Males of Intact Families		6
	Female Lone Parents Separately vs. Males of Intact Families	202.81 *	18
		127.89 **	9
1-5 thousand	Female Lone Parents Together vs. Females of Intact Families		6
	Female Lone Parents Separately vs. Females of Intact Families	1319.74 *	18
	Female Lone Parents Together vs. Males of Intact Families		6
	Female Lone Parents Separately vs. Males of Intact Families	606.34 **	18
5-10 thousand	Female Lone Parents Together vs. Females of Intact Families		6
	Female Lone Parents Separately vs. Females of Intact Families	430.61 *	18
		354.06 **	15
	Female Lone Parents Together vs. Males of Intact Families		6
	Female Lone Parents Separately vs. Males of Intact Families	128.11 *	18
		81.97 **	15
10-15 thousand	Female Lone Parents Together vs. Females of Intact Families		6
	Female Lone Parents Separately vs. Females of Intact Families		18
	Female Lone Parents Separately vs. Males of Intact Families	35.95 *	18
		4.85 **	3

* Significant at 0.05 level.

** Observed Chi square when columns are collapsed to avoid cells with less than five cases.

*** Columns cannot be collapsed in such a manner to get the table with cells less than five cases.

relation to individual income. The female lone parents differ significantly from the intact families only up to the $10,000-15,000 income group. They, separately as well as together, differ from both the females and the males of intact families up to $5,000-10,000 group. At $10,000-15,000 level, separately they do not differ significantly from the males of intact families when they are taken separately in different groups, with exception of the divorced female lone parents in below $1,000 level.

The female lone parents have a higher fertility than that of the males of intact families of the same income groups. The difference is more strongly established when the comparison is done with the females of intact families. The mean number of children born to the females of intact families in the 'under $1,000' group is even greater. But from the $1,000-5,000 group onwards, the females of intact families have fewer children than the males of intact families of the same income groups, in turn less the female lone parents have more children than the males as well as the females of intact families.

The differing pattern of female lone parents among themselves when controlled in relation to fertility and individual income is shown in Table 32. The significant differing categories in this case are widowed female lone parents vs. divorced female lone parents and widowed female lone parents vs. separated female lone parents in the under $1,000 group; widowed female lone parents vs. divorced

Table 32.

Pattern of Differentiation Among the Female Lone Parents by Individual Income and Number of Children, Canada: 1971.

Income	Groups	Chi Sq.	DF
Under $1,000	Widowed vs. Divorced	45.31 *	6
		43.29 **	3
	Widowed vs. Separated	44.11 *	6
		41.46 **	5
$1-5,000	Widowed vs. Divorced	82.87 *	6
	Widowed vs. Separated	93.25 *	6
	Divorced vs. Separated	14.24 *	6
$5-10,000	Widowed vs. Divorced	19.51 *	6
		15.18 **	5
	Divorced vs. Separated	18.19 *	6
		14.91 **	5

* Significant at 0.05 level.

** Observed Chi square when columns are collapsed to avoid cells with less than five cases.

female lone parents, widowed female lone parents vs. separated female lone parents and divorced female lone parents vs. separated female lone parents in the $1,000-5,000 income group; and the widowed female lone parents vs. separated female lone parents and divorced female lone parents vs. separated female lone parents in the $5,000-10,000 income group levels.

When considering individual income, the widowed female lone parents have more children than the divorced and the separated female lone parents. The divorced female lone parents in turn have fewer children than the separated female lone parents except in the $10,000-15,000 income group of the divorced.

B. REGRESSION ANALYSIS

Following are the results of the regression analyses. The description includes only those variables which were significant enough to be entered into the equation (see Table 33 to Table 38). It first gives the model for different marital statuses. Then it shows where each variable enters the equation for each marital status.

Widowed Female Lone Parents

Out of the eighteen categories of two categorical variables and the other four variables entered in the equation, only eight enter the equation model for the widowed female lone parents (See Table 33). Education with a

Table 33.

Summary Table of Stepwise Regression in the Marital Status of the Widowed.

Dep. Var.	RSQ	RSQ CHANGE	SIMPLE R	BETA
EDUHD	0.05631	0.05631	-0.23730	-0.16691
R.Cath.	0.08966	0.03336	0.22617	0.19199
Type of Resi.	0.12397	0.03430	-0.20218	-0.16948
Polish	0.12920	0.00524	-0.06869	-0.07434
INCHD	0.13198	0.00278	-0.17050	-0.05141
Italian	0.13452	0.00254	-0.02027	-0.05320
Ukrainian	0.13629	0.00177	-0.05341	-0.04444
Jews	0.13775	0.00146	-0.07978	-0.03919

(Constant 5.44607) F=36.20348 P=0.0000

negative relationship is the most important variable followed by the Roman Catholic religion with a positive relationship. Type of residence, Polish ethnicity, income of the head, Italian as well as Ukrainian ethnicity and Jewish religion are the other variables entering the equation and they all have a negative relationship with fertility. These eight variables together explain 13.8% of the fertility of the widowed female lone parents.

Divorced Female Lone Parents

In the case of the divorced, seven variables enter the equation model (See Table 34). Age at first marriage and education, both with negative relationships, have the first and the second most important positions, respectively. Income, Ukrainian and British ethnicity, all with a positive relationship, come to the third, fourth and the sixth positions in the equation. Affiliation to Greek Orthodox religion and no religion with negative relationship are the other two variables in the model and they respectively have the fifth and the seventh position. Only 7.5% of fertility of the divorced female lone parents is explained by the seven significant variables entering the model.

Separated Female Lone Parents

Education, age at first marriage, type of residence, income, and affiliation to the Lutheran, Greek Orthodox and United church are the seven variables in order entering the

Table 34.

Summary Table of Stepwise Regression
in the Marital Status of Divorced Female Lone Parents.

Dep. Var.	RSQ	RSQ CHANGE	SIMPLE R	BETA
AGEMARHD	0.01991	0.01991	-0.14109	-0.13945
EDUHD	0.03559	0.01568	-0.12785	-0.16254
INCHD	0.04623	0.01064	0.04758	0.11182
Ukrainians	0.05582	0.00959	0.09833	0.12461
Greek Orthodox	0.06519	0.00937	-0.09462	-0.09408
British	0.07093	0.00574	0.05143	0.07789
No Religion	0.07467	0.00374	-0.06017	-0.06207

(Constant 3.90679) F=4.76108 P=0.0000

equation model for the separated (See Table 35). All these variables together with negative relationships, explains 8.0% of the fertility of the separated female lone parents.

Males of Intact Families

Education, type of residence, Roman Catholic religion, income and Polish ethnicity in that order enter the equation model for the males of intact families when only the variables attributed to them are included in the equation (See Table 36). Except for the positive relationship in the case of Roman Catholic religion, all the other variables are negatively related with fertility. The five significant variables in the model for the males of intact families explain 10.9% of their fertility.

Females of Intact Families

Type of residence could not be included in the equation for the females of intact families, as such information was not available. Only two variables enter the model for them (See Table 37). They are the education and the income of the spouse, both with a negative relationship. Education is more important than their income in contributing to the fertility of the intact families. Even though there are only two significant variables entering the equation, they explain 10.9% of the fertility of the females of intact families.

Table 35.

Summary Table of Stepwise Regression in the Marital Status of Separated.

Dep. Var.	RSQ	RSQ CHANGE	SIMPLE R	BETA
EDUHD	0.05073	0.05073	-0.22522	-0.23801
AGEMARHD	0.06095	0.01022	-0.10406	-0.09996
Type of Resi.	0.06891	0.00796	-0.10273	-0.09077
INCHD	0.07411	0.00520	-0.00107	0.07652
Lutheran	0.07697	0.00287	-0.06274	-0.05747
Greek Orthodox	0.07923	0.00226	-0.04099	-0.04882
United Church	0.08080	0.00157	-0.04826	-0.04035

(Constant 5.621821) F=12.70868 P=0.0000

Table 36.

Summary Table of Stepwise Regression
in the Marital Status of Females Only of Intact Families.

Dep. Var.	RSQ	RSQ CHANGE	SIMPLE R	BETA
EDUSP	0.08746	0.08746	-0.29574	-0.25156
INCSP	0.10922	0.02176	-0.22615	-0.15397

(Constant 3.691478) F=14.71286 P=0.000

Table 37.

Summary Table of Stepwise Regression
in the Marital Status of Males Only of Intact Families.

Dep. Var.	RSQ	RSQ CHANGE	SIMPLE R	BETA
EDUHD	0.04867	0.04867	-0.22061	-0.22657
RUZIZEHD	0.07322	0.02455	-0.20000	-0.18474
Rom.Catholics	0.08932	0.01610	0.14154	-0.12932
INCHD	0.10414	0.01481	-0.00758	0.13441
Polish	0.10869	0.00455	-0.06604	-0.06771

(Constant 3.953719) F=11.31640 P=0.0000

Intact families (Males and Females)

Only three variables attributed to the males enter the equation when all the variables attributed to both the males as well as the females of intact families are included in the equation. Type of residence in the second, age at first marriage in the fourth, and the German ethnicity in the tenth position are these variables. (See Table 38.) Type of residence has a negative relationship while the other two variables are positively related to fertility. The other seven variables attributed to their female spouses are education, income, Polish ethnicity, and affiliation to United, Presbyterian, Baptist and Lutheran religion coming to the first, third, fifth, sixth, seventh, eighth, and the nineth positions, respectively - all with negative relationships. The ten significant variables in the model explain 19.8% of the fertility of intact families when the variables attributed to both the males, as well as the females are taken into consideration.

Following is the description of how important each variable is in explaining the fertility of different marital statuses considered for this study.

Age at First Marriage

Age at first marriage is negatively related among the divorced and the separated categories of lone parent families which is in line with the study by Hawthorn (1970:89). On the other hand it is positively related among

Table 38.

Summary Table of Stepwise Regression in the Marital Status of Males and Females of Intact Families.

Dep. Var.	RSQ	RSQ CHANGE	SIMPLE R	BETA
EDUSP	0.08746	0.08746	-0.29574	-0.19083
RUZIZEHD	0.11738	0.02992	-0.21352	-0.16821
INCSP	0.13454	0.01715	-0.22615	-0.13879
AGEMARHD	0.14715	0.01262	0.16552	0.13086
Polish(SP)	0.15521	0.00805	-0.06225	-0.08270
Uni.Church(SP)	0.16339	0.00819	-0.13956	-0.12301
Presby.(SP)	0.17132	0.00793	-0.08624	-0.09493
Baptist(SP)	0.17886	0.00754	-0.06201	-0.08735
Lutheran(SP)	0.18586	0.00700	-0.06288	-0.13320
German(HD)	0.19818	0.01232	0.06898	0.12291

(Constant 3.698435) F=5.73405 P=0.0000

the widowed which is in accordance with studies by Balakrishnan, Ebanks and Grindstaff (1979:34) and Henripin (1972:129). It is positively related among the males as well as the females of intact families.

Age at first marriage is the most important variable in explaining the number of children one has among the divorced female lone parents. Among the separated female lone parents, it is the second most important variable. When the widowed female lone parents are considered, it does not enter the equation. Nor does age at marriage enter the equation for the males and females of the intact families. At the same time, when all the variables related to both the males as well as the females of intact families are included into the regression analysis, it is the fourth important variable in the equation.

Correspondingly, it is seen that the widowed are more similar to males only, as well as females only, of intact families.

Ethnicity

Polish, Ukrainian, Italian and British origins are the important ethnic groups in explainig the fertility of female lone parents. On the other hand, only Polish and German ethnicity have significant roles for the fertility of intact families.

Polish ethnicity, negatively related, comes to the fourth position in the equation of the widowed, and the

fifth position when all the variables attributed to females, as well as males of the intact families are taken into consideration. This independent variable does not enter the equation for either males only or for females only. Polish ethnicity is also not significant enough to enter the equations for the divorced nor for the separated.

Being UKrainian is the fourth important variable among the divorced with a negative relationship, however, it has a positive relationship among the widowed and stands at the seventh position in their equation. This variable does not enter into the equation for any of the other categories.

Being Italian, which is important only among the widowed, comes to the sixth position in their equation. British and German ethnicity come only to the sixth position for the divorced and the tenth position for the intact families, respectively, when variables related to both males and females are included in the analysis.

As a whole, ethnicity does not seem to hold a very important position in the fertility of either the female lone parents or the intact families, when compared to the other variables entering the equations. None of the ethnic groups enter the equation for the separated and the females only of intact families. But when variables related to both males and females are considered in the intact families, only the ethnicity of the females is important.

Education

The negative relationship between education and fertility as shown in the general theories is found among all marital statuses. Education is the most important variable for all the categories except among the divorced. Among the divorced female lone parents, education comes in at the second position.

Religion

Taking religion apart from the other variables, Roman Catholicism, positively related at the second position, is the most important religion among the widowed, whereas it does not enter the equation for the other two categories of female lone parents. The Jewish religion comes in at the eighth position and has a negative relationship to fertility among the widowed. For the divorced, not being affiliated to any of the religions, comes in at the seventh and last position in the equation with a negative relationship. Affiliation to Lutheran, Greek Orthodox, and the United Church in the case of the separated, all with negative relationships, are the fifth, sixth and the seventh important variables, respectively.

Roman Catholicism with a positive relationship is the third variable for the males of intact families. But it does not enter the equation for the females only of intact families nor for intact families when both spouses are considered. Though none of the religions enter the equation

for the females of intact families when only variables related to them are considered, the affiliation of females in intact families to United, Presbyterian, Baptist and Lutheran Churches, all with negative relationships, are important when the variables related to the males are also taken into consideration. Thus one can say that the religion of the females is more important than that of their spouses in relation to fertility.

Type of Residence

Type of residence occupies the third position among the widowed and the separated female lone parents while it does not enter the equation in the case of the divorced. It occupies the second position in the case of intact families. The relationship is negative in all the three cases.

Individual Income

The position of individual income is almost the same in all the categories except among the males of intact families when all the variables are taken into consideration. Among the divorced female lone parents it comes to the third position, and among the separated female lone parents, the fourth position. Among the widowed female lone parents it comes to the fifth position. The income of the head comes to the fourth position when only variables related to him are included in the analysis. It takes the second position in the case of the females only of intact families. The income

of the spouse, that is the wife, comes to the second position when all the variables related to them, as well as their husbands are taken into consideration. The relationship is negative for all categories except among the divorced.

The R^2 for the females of intact families and males of intact families are 0.10922 and 0.10869 respectively. when only the variables concerning them are taken. The R^2 for the widowed female lone parents is very close (0.13775). But the variables explains much less for the divorced female lone parents (0.07467) and separated female lone parents (0.0808). When all the variables are taken in the case of males of intact families, the R^2 is 0.19818.

From the above description, it can be said that among the female lone parents, the divorced female lone parents differ the most from the intact families than do the separated or the widowed female lone parents. The widowed female lone parents differ the least from the general theories and the intact families than do the other categories of female lone parents.

V. CONCLUSIONS AND RECOMMENDATIONS

An analysis of the fertility of intact families in comparison to the different categories of female lone parents has been reported in Chapter IV with reference to the prevailing general fertility theories. This chapter initially provides the summary of the analysis, followed by study limitations, as well as recommendations for future research.

The socio-demographic variables selected for this study are age at marriage, ethnicity, education, religion, type of residence, and income and the following conclusions are presented in that order.

A. AGE AT FIRST MARRIAGE

Hypothesis 1. The divorced female lone parents and the separated female lone parents demonstrate a negative relationship between age at first marriage and the number of children which is consistent with the studies by Hawthorn (1970), Hill (1970) and Miller (1976). The widowed female lone parents, however, show a positive relationship as noted in the studies by Henripin (1970) and Balakrishnan, Ebanks and Grindstaff (1979). This positive relationship is also found for intact families when both the socio-demographic variables related to females of intact families and males of intact families are considered.

Hypothesis 2. The female lone parents differ from the intact families in relation to age at first marriage and

number of children for all age at first marriage categories. This is true when socio-demographic variables related to both the females and the males of intact families are taken into account.

Hypothesis 3. The widowed differ from the divorced female lone parents in all the age at first marriage categories except the 30-34 and 35-39 age at first marriage groups. The widowed differ from the separated female lone parents in the 15-19, 20-24, 25-29 and 35-39 age at first marriage groups. The divorced differ from the separated female lone parents only in the 20-24 and 25-29 age at first marriage groups.

The multivariate stepwise regression analysis shows that the divorced and the separated differ from the widowed, and the males only and females only of the intact families in terms of significant variables. Age at first marriage of the head is the most and the second most important variable in the models for the divorced and the separated, respectively. But this variable does not enter the equation model for the other three categories. When all the variables attributed to the females, as well as the males are included, the male's age at first marriage comes to the fourth position in the model. The divorced also differs from the other categories of marital statuses in the type of relationship between this variable and fertility, in manifesting a negative relationship while the other categories are positively related.

B. ETHNICITY

Hypothesis 1. The widowed female lone parents have the highest fertility among the women of French origin in accordance with the study by Kalbach and McVey (1979). Among the divorced female lone parents, the highest fertility is found among the Ukrainians. The highest fertility among the separated female lone parents is found among the women of Scandinavian origin.

The lowest fertility among the widowed, the divorced and the separated female lone parents, respectively, is found among women of Polish, Italian and German ethnic origins. Generally it is noted in demographic research that the lowest fertility is reported for Jewish populations.

Except in the case of the high fertility of the widowed female lone parents among the French origin population, none of the results from the studies cited in Chapter II hold true in the case of the female lone parents regarding highest fertility or lowest fertility.

Hypothesis 2. The female lone parents as a whole and separately differ significantly from the intact families in all the ethnicity groups, except among the people of Dutch and Polish ethnic origins.

Hypothesis 3. The widowed female lone parents differ from the divorced female lone parents among the British, French German and the 'Others' ethnic origin. The widowed female lone parents differ from the separated female lone parents among the British and the French. The divorced

female lone parents differ from the separated female lone parents among the French and the 'Others' ethnic origin.

According to the multiple regression analysis, Polish, Italian and Ukrainian ethnicity, all with negative relationships, are important for the fertility of the widowed. In the case of the divorced lone parents, Ukrainian and British ethnicity are important. Ukrainians have a positive relationship with fertility in the case of the divorced, but a negative relationship among the widowed. British ethnicity is positively related with fertility among the divorced. None of the ethnic groups enter the equation for the separated.

Polish ethnicity enters the equation for the males of intact families, however, none of the ethnic groups enter the equation for the females of intact families. When both males and females are considered, the female spouse being Polish and the males being German are important variables.

C. EDUCATION

Hypothesis 1. A negative relationship between education and number of children holds for all categories of female lone parents.

Hypothesis 2. All the categories of female lone parents, as a whole an separately, differ from the intact families at the elementary, secondary, some university and university levels of education when socio-demographic variables related to females of intact families and males of

intact families are considered. At the no education level, however, they differ from the females only of intact families.

Hypothesis 3. The widowed differ from the divorced female lone parents at the elementary and secondary educational levels. The widowed also differ from the separated female lone parents at the elementary and secondary school levels. The divorced differ from the separated female lone parents only at the elementary level of schooling.

No differences were found at the no education, some university, and university levels.

The multivariate regression analysis shows that all the categories of female lone parents are similar to the males only and females only of intact families - all showing a negative relationship between education and fertility. Regression analysis shows that only the divorced differ from the other marital statuses in the degree of importance this variable has in the models. All the marital statuses have education at the most important place, whereas it is at the second most important place in the case of the divorced. In the model for both the males and the females of intact families, education of the spouse comes to the first place whereas the education of the head does not enter the model at all.

D. RELIGION

Hypothesis 1. Catholics generally have higher fertility than Protestants, however, among female lone parents, this is only partially supported. The Roman Catholics have the highest fertility in the case of the widowed female lone parents. Among the divorced female lone parents, the highest fertility is found among the Ukrainian Catholics while the Roman Catholics reported low fertility. The Roman Catholics and the Ukrainian Catholics have the third and the fifth highest fertility, respectively, among the separated female lone parents. In all three categories, the 'Other' religious category comes second, which tends to support findings of the study by Balakrishnan, Ebanks and Grindstaff (1976) in that, the Hutterites, Mennonites and the Mormons have the highest fertility.

The widowed female lone parents with the lowest fertility is found among the Jewish population. Both the divorced and the separated female lone parents with the lowest fertility was found among the Greek Orthodox population.

Hypothesis 2. Female lone parents differ from intact families, together as well as separately, when socio-demographic variables related to both the females of intact families and males of intact families are considered for all the religious groups, except the Greek Orthodox and the Jews.

Hypothesis 3. The widowed differ from the divorced female lone parents among the Anglicans, Roman Catholics, United Church and 'Other' religions. The widowed differ from the separated female lone parents among the Anglicans, Roman Catholics and 'Other' religions. The divorced differ from the separated female lone parents among the Roman Catholics and 'Other' religions.

Roman Catholicism and the Jewish faith with positive and negative relationships, respectively, entering at the second and eighth positions are important to the fertility among the widowed. For the divorced not being affiliated to any of the religions plays an important role at the seventh position with a negative relationship. Negative relationships to fertility with Lutheran, Greek Orthodox and the United Church religions (fifth, sixth, and seventh positions, respectively), play important roles in the case of the separated lone parents.

Roman Catholicism, with a negative relationship appearing at the third position, is the only influential religion for the males of intact families. None of the religious groups enter the equation for the females only of intact families. When both males and females of intact families are considered, the affiliation of the females to the United, Presbyterian, Baptist, or Lutheran churches is important. None of the religious groups for the males enter the equation.

E. TYPE OF RESIDENCE

Hypothesis 1. All the categories of female lone parents evidence negative relationships with population density and fertility.

Hypothesis 2. The female lone parents, together as well as separately, differ from the males of intact families in all types of residence categories in relation to fertility.

Hypothesis 3. The widowed differ from the divorced female lone parents among the rural farm, rural non-farm, and urban categories. The widowed differ from the separated female lone parents among the rural non-farm, and urban categories. The divorced differ from the separated female lone parents only among the urban category with more than 30,000 inhabitants.

Regression analysis shows that type of residence does not play a significant role in the fertility of the divorced female lone parents. It comes to the third position in the models for the separated and the widowed female lone parents and to the second position in the case of the males of the intact families. The relationship between this variable and fertility is negative in the models for these marital statuses.

F. INCOME

Hypothesis 1. The negative relationship between income and fertility holds true for all the three categories of female lone parents.

Hypothesis 2. The female lone parents together, and as a whole, differ from the females of intact families and the males of intact families up to the 10,000-15,000 dollar income group.

Hypothesis 3. The widowed differ from the divorced female lone parents in the under 1,000, 1,000-5,000 and the 5,000-10,000 dollar income groups. The widowed differ from the separated female lone parents in the under 1,000, 1,000-5,000 dollar income groups. The divorced differ from the separated female lone parents in the 1,000-5,000 and 5,000-10,000 dollar income groups.

Multivariate regression analysis shows that the relationship between income and fertility is negative for all the categories except the divorced female lone parents. Income enters at the third, fourth and fifth positions among the divorced, separated and widowed, respectively. Among the females only and males only of intact families, it enters at the second and fourth positions, respectively. Income of the female enters at the second position when variables attributed to females, as well as males are taken into consideration.

To summarize, the pattern of fertility of female lone parents tends to support the general fertility differentials of education and type of residence, except for the divorced in the latter instance. In the case of age at first marriage, only the widowed do not evidence the negative relationship found among the divorced and the separated

female lone parents. Of the three marital statuses of female lone parents, only the widowed status tends to support the general fertility differential of ethnicity. With regard to religious affiliation, the widowed manifest the highest degree of similarity and the divorced female lone parents show the least degree when considering high fertility. When low fertility is taken into consideration, only the widowed conformed to the general pattern of the lowest fertility differential found among Jewish populations. The divorced female lone parents differ the most from the intact families and the widowed female lone parents differ the least in terms of fertility patterns. The greatest difference among the female lone parents is between the widowed and the divorced and the least difference is between the divorced and the separated.

G. LIMITATIONS AND RECOMMENDATIONS

The use of certain variables concerning fertility provided in the other two Public Use Sample Tape files - individual and household - is not possible as comparisons cannot be made due to independent stratified sample selection for each file.

The socio-demograpic variables regarding the ex-husbands of the female lone parents may have explained more of their fertility patterns, however, they are not available in Public Use Sample Tape files.

The study of never-married lone parents, women or men, is not possible from the data provided in the Public Use Sample Tape files as these data are not reported in the census.

Another limitation is the reporting of only people above fifteen years of age as married. Females under fifteen who reported being married were classified as unmarried in the data compilation. The study of lone parents under the age of fifteen would provide a more comprehensive understanding of fertility patterns.

A study including the number of completed years since the date of first marriage of the head and of the spouse, the number of times the spouses of the husband-wife families as well as the lone female heads were married, the time of the death of the husbands of the widows, and the time of divorce and of separation would have permitted greater refinement to our understanding of fertility patterns for different marital statuses.

Information about the place of birth - native-born or foreign-born - with regard to ethnicity is not available. This lack of information creates problem for analysis of the ethnicity variable.

Cross tabulations controlling for more than one additional variable would have provided a better understanding of the dependent variable. The small sample size for female lone parents provided by the Public Use Sample Tape files prevents one from doing so.

The conclusions in Chapter IV shows that the greatest difference between the female lone parents and the intact families is between the divorced female lone parents and the intact families. The greatest difference found among the female lone parents is between the widowed and divorced, hence, it may be said that this difference is due to the possible greater length of time following the formal dissolution of marriage than the time following the separation in the case of the separated female lone parents or the time spent without a spouse in the case of the widowed. A study using actual duration of marriage which was not possible with the data from the Public Use Sample Tape would be more informative. A study with data providing information about voluntary and/or involuntary abortions, as well as actual births, would provide a more complete understanding of reproductive behaviour of female lone parents.

The variables selected for the study explains only 7.5% of the divorced, 8.1% of the separated, and 13.8% of the widowed lone parent fertility patterns. Research incorporating the additional above suggested variables would likely contribute to a fuller explanation of the fertility of the female lone parent.

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